

1044b UIC - EAST POPLAR OIL FIELD
ENFORCEMENT CASE SDWA 1431
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107-4 CIVIL LAW DEPOSITION
RECEIVED AFTER OCTOBER 3, 2001

East Poplar Oil Field

DEPOSITION EXHIBITS

Region 8

13599

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
BILLINGS DIVISION

CARY G. YOUPEE; D. DWIGHT
YOUPEE; JOSI YOUPEE; RENE
MARTELL; MARVIN K. YOUPEE, SR.,
individually and as represen-
tative and next friend of
MARVIN YOUPEE, JR., WILLIAM
YOUPEE III, IRIS YOUPEE, and
BRITTANY YOUPEE; EUGENE ABBOTT;
MARGARET ABBOTT; CHARLES FOUR
BEAR, individually and as
representative and next friend
of JORAY FOUR BEAR, JONATHON
LITTLE WHIRLWIND, AVA LEE
LITTLE WHIRLWIND and CHARLES
FOUR BEAR II; ANNA FOUR BEAR;
GEORGE F. RICKER, SR.; HELEN
RICKER; GEORGE F. RICKER, JR.,
individually and as represen-
tative and next friend of ERIN
RICKER; WILLIAM T. RICKER;
ABIGAIL REDDOOR; IRMA REDDOOR;
LAURA BLEAZARD, individually
and as representative and next
friend of DAVID BLEAZARD; ROSS
BLEAZARD; ERICA BLEAZARD;
TRIVIAN GRAINGER, individually
and as representative and next
friend of DANIEL GRAINGER and
ADAM GRAINGER; DAVID GRAINGER;
DAWN GRAINGER; DENISE GRAINGER,
individually and as represen-
tative and next friend of
JORDAN GRAINGER, JAY GRANDCHAMP
and TINA KOHL; DONNA BUCKLES-
WHITMER; WARREN WHITMER; and
ALLEN YOUPEE,

Plaintiffs,)

v.)

MURPHY EXPLORATION & PRODUCTION
CO., a Delaware corporation;
MESA PETROLEUM CO., a Delaware
corporation; PIONEER NATURAL
RESOURCES USA, INC., a Delaware
corporation; SAMSON HYDRO-
CARBONS COMPANY, an Oklahoma

CV-98-108-BLG-JDS

DEPOSITION
EXHIBITS

1 corporation; MARATHON OIL, an)
 2 Ohio corporation; and JOHN DOES)
 10 through 50,)
 Defendants.)
 3 _____)
 4 MESA PETROLEUM and PIONEER)
 5 NATURAL RESOURCES USA, INC.,)
 Defendants/Third-Party)
 Plaintiffs and)
 6 Cross-Plaintiffs,)
 v.)
 7)
 8 AMARCO RESOURCES CORP.; BESTWAY,)
 INC.; WESTDALE PETROLEUM, INC.;)
 and THE PRUDENTIAL GROUP,)
 9 Third-Party Defendants,)
 v.)
 10)
 11 JOHN DOES 4-50,)
 Cross-Defendants.)
 12 _____)

14 DEPOSITION EXHIBITS

15 50 05/29/01 Notice of Deposition and Notice to
 Designate
 16
 17 51 1997 Map by Thamke and Craigg, Water-Resources
 Investigations Report 97-4000
 18
 19 52 07/23/81 CAODC Exhibit A, Bid Sheet and Well
 Specifications for Standard Drilling Contract
 20
 21 53 03/26/01 Answer of Marathon Oil Company to
 Plaintiffs' Seventh Amended Complaint and
 Demand for Jury Trial
 22
 23 54 05/29/01 Notice of Deposition and Notice to
 Designate
 24
 25 55 04/17/01 Letter to Dolan from Ross
 56 04/00 Pioneer Natural Resources' Field
 Investigation Plan

1 57 06/04/01 Answer of Defendants Mesa Petroleum
2 Co. and Pioneer Natural Resources, USA, Inc.
 to Plaintiffs' Eighth Amended Complaint
3 58 03/00 Community Relations Plan, Former Mesa
4 Production/Disposal Well Site, East Poplar Oil
 Field, Fort Peck Indian Reservation
5 59 08/00 Excerpt, p. 9, CH2MHill Report, Field
6 Investigation, Biere Well Evaluation
7 60 09/11/84 - 09/17/84 Addition to Well Record,
 Biere 1-22
8 61 04/30/99 Murphy Exploration & Production
9 Company's Responses to Plaintiffs' Second
 Discovery Requests
10 62 05/99 An Operational and Environmental
11 Assessment, East Poplar Unit Oil Field,
 Northeast Montana, by Holm Technical Services
12 63 04/09/99 Murphy Exploration & Production
13 Company's Responses to Plaintiffs' First
 Discovery Requests
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1 Richard J. Dolan
2 Brian K. Gallik
3 GOETZ, GALLIK, BALDWIN & DOLAN, P.C.
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5 P.O. Box 6580
6 Bozeman, MT 59771-6580
7 (406) 587-0618

8 ATTORNEYS FOR PLAINTIFFS

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IN THE UNITED STATES DISTRICT COURT
FOR THE STATE OF MONTANA
BILLINGS DIVISION

Cause No. CV-98-108-BLG-JDS

CARY G. YOUPEE; D. DWIGHT YOUPEE;
JOSI YOUPEE; RENE MARTELL; MARVTN
K. YOUPEE, SR., individually and
as representative and next friend
of MARVTN YOUPEE, JR., WILLIAM
YOUPEE III, IRIS YOUPEE, and
BRITTANY YOUPEE; EUGENE ABBOTT;
MARGARET ABBOTT; CHARLES FOUR BEAR,
individually and as representative
and next friend of JORAY FOUR BEAR,
JONATHON LITTLE, WHIRLWIND, AVA LEE
LITTLE WHIRLWIND and CHARLES FOUR
BEAR II; ANNA FOUR BEAR; GEORGE F.
RICKER, SR.; HELEN RICKER;
GEORGE F. RICKER, JR., individually
and as representative and next friend
of ERIN RICKER; WILLIAM T. RICKER;
ABIGAIL REDDOOR; IRMA REDDOOR; LAURA
BLEAZARD, individually and as
representative and next friend of DAVID
BLEAZARD; ROSS BLEAZARD; ERICA BLEAZARD;
TRIVIAN GRAINGER, individually and
as representative and next friend of
DANIEL GRAINGER and ADAM GRAINGER; DAVID
GRAINGER; DAWN GRAINGER; DENISE GRAINGER,
individually and as representative and
next friend of JORDAN GRAINGER, JAY GRANDCHAMP
and TINA KOHL; DONNA BUCKLES-WHITMER; WARREN
WHITMER; and ALLEN YOUPEE,

Plaintiffs,

v.

MURPHY EXPLORATION & PRODUCTION
CO., a Delaware corporation;
MESA PETROLEUM CO., a Delaware
corporation; PIONEER NATURAL



1 RESOURCES USA, INC., a Delaware
2 corporation; SAMSON HYDROCARBONS
3 COMPANY, an Oklahoma corporation;
MARATHON OIL, an Ohio corporation;
and JOHN DOES 10 through 50,

4 Defendants.

5 NOTICE OF DEPOSITION AND NOTICE TO DESIGNATE

6 TO: Marathon Oil Company, and its attorney of record Gerald Murphy:

7 The Plaintiffs, pursuant to Rule 30(b)(6), M.R.Civ.P., will take the deposition of
8 Marathon Oil Company, a Corporation of 1501 Stampede Avenue, Cody, Wyoming 82414, #972-
9 444-9001. Upon oral examination on June 19, 2001 at the hour of 9:00 a.m., before Joann C.
10 Bacheller, Court Reporting Services at Moulton, Bellingham, Longo & Mather, P.C., Suite 1900,
11 Sheraton Plaza, P.O. Box 2559, Billings, MT 59103-2559. The examination will continue from
12 day to day until completed.

13 Marathon Oil Company shall designate one or more officers, agents, or other persons who
14 can testify on its behalf with respect to the following matters:

- 15 1. Corporate finances such as yearly net income and yearly dividends paid for the last
16 three years for purposes of figuring appropriate punitive damages.
- 17 2. Acquisition of oil and gas leases which make up the Unit.
- 18 3. Formation and operation of the Unit.
- 19 4. Operation of the wells and related facilities on or near the Plaintiffs' property and
20 on adjacent property within the Unit.
- 21 5. Knowledge of oil and/or saltwater spills or leaks to the surface as well as
22 underground leaks to freshwater.
- 23 6. Knowledge of mechanical problems with any of its wells or related equipment or
24 facilities.
- 25 7. Environmental policies including procedures for reporting and cleaning up leaks
26 and/or spills.
- 27 8. Policy regarding plugging of wells and remediation of pits.
- 28

9. Knowledge of the location, type, size, and status of all pipelines historically or presently in use of the unit. This includes any pipelines that run to or from the unit to another location.
10. Knowledge of all pipeline easements.
11. Knowledge of all field operations on lands near the Plaintiffs' property.
12. Insurance coverage regarding the Plaintiffs' claims.
13. Knowledge of the factual basis of its affirmative defenses.
14. Knowledge of the history and ownership of the property and operations that are the subject of the lawsuit. This would include any conveyance or assignment of rights in the property or operations and any enlargement of rights to the property and operations.
15. Knowledge of the operations of all pipelines such as size and types of lines, depth of lines and products transported by such pipelines.
16. Knowledge of the physical changes in the operations and property over time. This would include drilling of wells, plugging of wells, building of pits, closing of pits, injection and disposal activities, installation of pipelines, removal of pipelines, repairs of pipelines, well status, surface storage facility operations, line lease agreements, cooperative agreements and saltwater disposal agreements.
17. Knowledge of all engineering and/or geologic studies having to do with operations including drilling, production, completion; plugging, abandonment, disposal, injection, secondary recovery, tertiary recovery, original oil in place, fill up, gas caps, drive mechanisms, formations, fresh water aquifers, formation pressures, formation fluids, corrosion, fluid levels, divestiture and any and all other aspects of the oil and gas operations which have been carried out by Marathon.
18. Knowledge of how the oil and gas operations are monitored to insure good maintenance practices are adhered to and that these operations do not impact the environment.

- 1 19. Knowledge of how the Defendant makes sure it is complying with state and federal
2 laws governing its oil and gas operations.
3 20. Knowledge of the state and federal laws which govern its oil and gas operations.
4 21. Knowledge of compliance or non-compliance with all regulatory requirements.
5 22. Knowledge of the financial worth of the company.
6 23. Knowledge of any communications with Plaintiffs.
7 24. Knowledge of any communications with governmental agencies concerning claims
8 of pollution in the area of the Plaintiffs' property.
9 25. Knowledge of any communications with the United States Geologic Survey.
10 26. Knowledge of all ground water testing during the ordinary course of business in
11 the area of the Plaintiffs' property.
12 27. Knowledge of all testing, including but not limited to monitor wells, geophysical
13 surveys, boreholes, water wells and surface waters which would insure the
14 Defendants' oil and gas operations were not causing pollution.
15 28. The responses that the Defendants have made to charges of pollution by the USGS
16 and the EPA. This should include all testing and investigations.

17 The Plaintiff requests Marathon Oil Company, pursuant to Rule 34, M.R.Civ.P., to
18 produce at the above time and place, and permit the Plaintiff to inspect and copy, photograph, etc.
19 the following:

- 20 1. All documents responsive to Plaintiffs' prior discovery requests that have been
21 located, discovered, and/or generated but have not been produced.

22 DATED this 27 day of May, 2001.

23 Richard J. Dolan
24 Brian K. Gallik
25 GOETZ, GALLIK, BALDWIN & DOLAN, P.C.
26 35 North Grand
27 P.O. Box 6580
28 Bozeman, MT 59771-6580

By: 
Brian K. Gallik
ATTORNEYS FOR PLAINTIFFS

CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of the above and foregoing was duly served upon the following by depositing same, postage prepaid, in the United States mail this 22 day of May, 2001.

Carolyn S. Ostby
Michael E. Webster
Crowley, Haughey, Hanson,
Toole & Dietrich P.L.L.P.
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490 North 31st Street
P.O. Box 2529
Billings, MT 59103-2529

Attorneys for Murphy
Exploration & Production
Co.

John Walker Ross
Brown Law Firm, P.C.
315 North 24th Street
P.O. Box 849
Billings, MT 59103-0849

Attorneys for Mesa
Petroleum Co. and Pioneer
Natural Resources, USA,
Inc.

Robert Sterup
Dorsey & Whitney LLP
1200 First Interstate Center
401 North 31st Street
P.O. Box 7188
Billings, MT 59103

Attorneys for Samson
Hydrocarbons Company

Gerald B. Murphy
Moulton, Bellingham, Longo
& Mather, P.C.
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P.O. Box 2559
Billings, MT 59103-2559

Attorneys for Marathon
Oil Company

Kirby J. Iler
Regional Counsel
Marathon Oil Company
1501 Stampede Avenue
Cody, WY 82414-4721

Attorneys for



Brian K. Gallik



CONTRACT NUMBER	
OPERATOR	CONTRACTOR

EXHIBIT A
BID SHEET AND WELL SPECIFICATIONS
FOR
STANDARD DRILLING CONTRACT

TO: (Contractor)
Bird Drilling Inc.
800 - 304 - 8th Ave. S.W.
Calgary, Alberta T2P 1C2

FROM: (Operator)
Texas Oil & Gas Corporation
300 - 2705 Montana Ave.
Billings, Montana 59101

Gentlemen:

We solicit your bid to drill and complete the hereinafter designated well. This bid form has been filled in by us to the extent necessary to disclose the manner in which we desire the well to be drilled. If you desire to submit a bid, please complete this instrument in every respect, execute the original and two copies, and return to our office at _____ not later than _____ hours, _____ 19____.

Very truly yours,
Texas Oil & Gas Corporation

Operator -
By: _____

1. NAME AND LOCATION OF WELL:

Well Name Buckles B #1 Rocky Mountain State of Montana -Roosevelt Cty.
Well Location and Land Description NW/NE Sec. 22, 28N, 51E

2. COMMENCEMENT DATE:

Contractor agrees to commence actual drilling operations at the above location on or before to be determined 19____, or, in the event Operator is to clear and grade and furnish roadway or other ingress or egress facilities within _____ days from the date of completion of the clearing and grading and construction of roadway, or such other ingress or egress facilities, whichever is the later.

3. DEPTH:

Subject to right of Operator to abandon the well or to have the well completed at a lesser depth, Contractor agrees to drill the well to a total contract depth of 6,000 feet ~~metres~~ Contractor will drill the well on a drilling basis (see Section 13 hereof) to _____ metres or the top of the _____ formation, or _____ metres into _____ formation, whichever is first reached. Drilling between the drilling contract depth and final contract depth, if any, shall be at daywork rates as specified in Section 13 hereof.

4. RIG AND EQUIPMENT TO BE FURNISHED BY CONTRACTOR:

4.1 Contractor's rig # 5 or 7 and inventory attached or see Item 4.2.

4.2 Contractor's rig # _____

Drawworks _____
Engines — number, make and models _____
Slush pumps — make, model and size _____
Auxiliary pump and power _____
Derrick or mast — make, size and capacity _____
Substructure — height and capacity _____
Drill pipe — sizes and amounts _____
Drill collars — sizes and numbers _____
Present location of rig _____
Estimated availability of rig _____

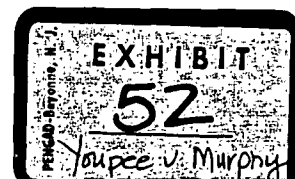
4.3 Blowout preventers — power actuated.

Casing String	BOP Size	Pressure Rating	No. & Style	BOP Pressure Tests	
				Frequency	kPa
Surface:	<u>10"</u>	<u>900</u>	<u>Shaffer</u>	<u>24 hours</u>	<u>1,000 psi</u>
Intermediate:					
Production:	<u>10"</u>	<u>900</u>	<u>Hydril</u>	<u>24 hours</u>	<u>1,000 psi</u>

5. EQUIPMENT, MATERIALS AND SERVICES TO BE FURNISHED BY DESIGNATED PARTY:

The machinery, equipment, tools, materials, supplies, instruments, servicing and labour listed as the following numbered items include any transportation required for such items unless otherwise specified and shall be provided at the location and at the expense of the party hereto as designated by an "X" in the appropriate column. (Also see Section 2.4 of the Drilling Contract).

Item	To Be Provided By		At the Expense of	
	Contractor	Operator	Contractor	Operator
5.1 Provision for and maintenance of adequate roadway to location, rights of way including road tolls, highway crossings, cattleguards and gates.		<u>0</u>		<u>0</u>
5.2 Clearing and grading of location.		<u>0</u>		<u>0</u>



Item	To Be Provided By		At the Expense of	
	Contractor	Operator	Contractor	Operator
5.3 (a) Cellar and matting _____	C		C	
(b) Rathole, conductor, mousehole expense to \$ _____ (1)		0		0
(c) Rathole, conductor, mousehole expense in excess of \$ _____ (1)		0		0
(1) includes expenses of materials, drilling, setting and cementing same.				
5.4 Slush pits or special steel pits. _____		0		0
5.5 Transportation of Contractor's rig: <u>Operator will be responsible to move</u>				
(a) Move in and rig up costs of \$ _____ <u>Contractors rig to the above location</u>				
(b) Move out costs of \$ _____ <u>including trucking and rig up labour.</u>				
(c) Stack out costs of \$ _____ <u>Extra labour or trucking costs to move</u>				
cased well. _____ <u>in or off location resulting from</u>				
(d) Labour costs of \$ _____ <u>adverse lease or weather conditions</u>				
(e) Labour costs of \$ _____ <u>will be charged to the Operator.</u>				
(f) Leveling of rig _____				
(g) _____				
5.6 Towing services to include truck charges for rig or additional equipment. _____		0		0
5.7 Special moving equipment for rig supplies or personnel if road becomes impassable by normal transportation means or vehicles. _____		0		0
5.8 Steel mud & circulating tanks of _____ m ³ volume. _____	C		C	
5.9 Fuel: Rig and camp _____		0		0
Boiler _____				
Other _____				
Normal fuel storage of _____ 1,500 gals. _____ litres	C		C	
Additional fuel storage of _____ litres				
The cost of fuel is included in the quoted drilling and/or daywork rates based on \$.45c per gal. _____ per bbl of diesel fuel, F.O.B. location. Operator will reimburse Contractor for any additional fuel costs above \$.45c per gal. _____ per bbl, F.O.B. location.				
5.10 Total water costs (1) for rig and camp to \$ _____ per day.		0		0
Total water costs (1) for rig and camp in excess of \$ _____ per day.				
(1) Calculated from spud to release of rig and total water costs include hauling costs prior to spud.				
5.11 Water storage at location _____ 250 bbls. _____	C		C	
5.12 Bits — drilling _____	C		C	
— daywork _____		0		0
5.13 Reamers, stabilizers, special drilling tools: _____	C		C	
— drilling _____		0		0
— daywork _____		0		0
5.14 Diamond core barrel, handling tools and accessories _____		0		0
5.15 Casing, essentially as specified herein _____		0		0
5.16 Casing shoes, floats, centralizers, scratchers _____		0		0
5.17 Casing tools (as per casing program) _____		0		0
5.18 Power casing tongs for — surface casing _____		0		0
— intermediate casing _____		0		0
— long string _____		0		0
5.19 Tubing _____		0		0
5.20 Tubing tools _____		0		0
5.21 Tubing power tongs _____		0		0
5.22 Cement and cementing services for — surface casing _____		0		0
— intermediate casing _____		0		0
— long string _____		0		0
5.23 Extra labour for casing jobs _____		0		0
5.24 Swabbing unit with swab line _____		0		0
5.25 Swabbing accessories to include cups, lubricators, sinker bar, etc. _____		0		0
5.26 Electrical logging and other wire line formation survey services _____		0		0
5.27 Drill stem formation testing services _____		0		0
5.28 Gun or jet perforating services _____		0		0
5.29 Inspection services for Contractor's drill string _____	C		C	
5.30 Special strings of drill pipe and drill collars as follows: _____		0		0
5.31 Kelly joints, subs, elevators, slips and handling tools for use with special strings of drill pipe and drill collars _____		0		0
5.32 Drill pipe protectors for kelly joints and each joint of drill pipe running inside of casing for use with normal strings of drill pipe _____		0		0
5.33 Drill pipe protectors for kelly joints and each joint of drill pipe running inside of casing for use with above noted special strings of drill pipe _____		0		0
5.34 Fishing tools and services—drilling _____	C		C	
— daywork _____		0		0
5.35 _____ One _____ pen penetration and recording device _____		0		0
5.36 Conventional drift indicator _____	C		C	

8. STRAIGHT HOLE SPECIFICATIONS:

Well Depth		Maximum Distance Between Surveys, metres	Maximum Deviation from Vertical, Degrees	Maximum Change of Angle (or Over-All Angle) Between Any Two Surveys, Degrees*
From	To			
<u>As determined by Operator.</u>		<u>5</u>	<u>5</u>	<u>1</u>
<u>Contractor will make every effort to insure that the hole remains within Operators deviation limits, however should deviation occur greater than specified above, the rig will immediately go on Daywork.</u>				
<u>metres shall be</u>				

*Reduce proportionately for survey intervals less than 30 metres, but do not use intervals less than 10 metres. The foregoing rate of change shall not be limiting in case of whipstocking approved by Operator.

9. PROPOSED CORING PROGRAM:

Approx. Depth	Formation	Type Core	Size	metres
<u>To be determined by the Operator</u>				

10. PROPOSED WIRE LINE SURVEYS:

Type or Kind	From	To	Remarks
<u>To be determined by the Operator</u>			

11. PROPOSED FLUID PRODUCTION TESTS:

Type or Kind	From	To	Zone to be tested
<u>To be determined by the Operator</u>			

12. DESIGNATED REPRESENTATIVES:

Operator	Contractor
<u>Leo Hearsh</u>	<u>T. Ilrichsen or R. Currie</u>
(name)	(name)
<u>300 - 2705 Montana Ave., Billings, Montana</u>	<u>800 - 304 - 8th Ave. S.W., Calgary, Alberta</u>
(address)	(address)
<u>(406) 248-4330</u>	<u>(403) 269-1411 or (403) 271-6897</u>
(day telephone number)	(day telephone number)
<u></u>	<u></u>
(night telephone number)	(night telephone number)

13. COMPENSATION TO BE PAID CONTRACTOR:

- (a) For work performed on a drilling basis, the sum of \$ 20.00 per foot for each linear foot of hole drilled. Such linear measure shall be determined by steel line measurement and such measurement shall be from top of rotary drive bushing to the total depth drilled less distance from ground level or water bottom to the top of the rotary drive bushing and less metres drilled while work is performed on a daywork basis. If a cellar is furnished by Operator, ground level shall be construed to mean the bottom of such cellar.
- (b) For all work performed with a full crew on a daywork basis, as defined in the contract, Contractor shall be paid a rate for each twenty-four (24) hour day as follows:

Depth Intervals		With Drill Pipe	Without Drill Pipe	Using Operator's Pipe
From	To			
<u>0</u>	<u>T.D.</u>	<u>\$6,600.00</u>	<u>\$6,600.00</u>	<u>\$6,600.00</u>

- (c) A full crew shall consist of 5 men. Each shift shall consist of 8 hours. For each man the crew is short, Contractor's day rate shall be reduced by the daily rate of pay for such man.
- (d) If it becomes necessary to shut down Contractor's rig for repairs while Contractor is performing work on a daywork basis, Contractor shall be allowed compensation during such repairs at the applicable daywork rate commensurate with the stage of operations then in effect. The number of hours for which Contractor is to be compensated shall be limited as follows:
- For any one repair job: hours
- Total hours per month:
- Total hours in the aggregate for the well: 18
- (e) For standby time while waiting on orders or materials, services or other items to be furnished by Operator, a standby rate of \$ 6,600.00 per twenty-four (24) hour day with full crew or \$ 4,080.00 per twenty-four (24) hour day with no crew. Watchmen shall be charged at \$ /man/twenty-four (24) hour day. Other standby:
- (f) If the formation drilled to on a drilling basis is unproductive and Operator elects to plug and abandon the hole, Contractor agrees to furnish up to 12 hours of rig time without charge for such abandonment. This period begins as soon as orders are received to either run casing or abandon & continues until 5 hours after the casing is satisfactorily cemented or the last plug is run on abandonment - any additional time required to set casing or abandon will be on a Daywork basis.

Item	To be Provided By		At the Expense of	
	Contractor	Operator	Contractor	Operator
5.37 Normal storage for mud and chemicals				
5.38 Well head connections and all equipment to be installed in or on well head or on the premises for use in completion of the well				
5.39 Well site restoration to include pits				
5.40 Welding services for casing jobs and/or well head connection				
5.41 Casing bowl: size _____ type _____				
5.42 Crew transportation and subsistence expense <u>including toolpush</u> \$ <u>50.00</u> per man/day	C			O
5.43 Camp: 4 unit camp (20 men) while in use, chargeable at \$ _____ per day. _____ unit camp (_____ men) while in use, chargeable at \$ _____ per day. Camp standby at \$ _____ per day Camp transportation _____ Camp personnel transportation _____ Transportation of groceries _____ Separate light plant (if required) at \$ _____ per day Other _____				
5.44 Boiler and normal winterization: _____ boilers while in use, chargeable at \$ _____ per day. Special winterization of _____				
5.45 Desander: _____ type at \$ _____ per day.		O		O
5.46 Desilter: _____ type at \$ <u>175.00</u> per day.	C			O
5.47 Degasser: _____ type at \$ _____ per day.		O		O
5.48 High Speed Shale Shaker _____ type at \$ _____ per day.				
5.49 Shock Sub: _____ type at \$ _____ per day.		O		O
5.50 Special mud-treating equipment of _____		O		O
5.51 BOP bleed-off manifold: size _____ 2"	C		C	
5.52 Special manifold equipment as follows: _____ at \$ _____ per day.		O		O
5.53 Overtime crew labor charge for Statutory Holidays or at Operator's request		O		O
5.54 Breathing and safety apparatus: (a) Normal required by Worker's Compensation Board. (b) Special breathing or safety equipment apparatus and supervision required because of hydrogen sulphide testing, hole conditions, well site remoteness, etc.		O		O
5.55 Special allowance for oil-based or invert mud: (a) \$ _____ per man per day clothing allowance based on _____ men. (b) \$ _____ per day for additional rig expense.				
5.56 Municipal well tax & <u>inhibitors or chemicals for drilling string</u>				
5.57 <u>Protection-oxygen scavenger plus H2S protection. Any</u>				
5.58 <u>damage to drill string due to H2S gas or corrosive drilling</u>				
5.59 <u>fluids will be charged to the Operator</u>				
5.60 Additional equipment and services: _____ _____ _____				

6. CASING AND CEMENTING PROGRAM:

Minimum Hole Diameter	Casing OD mm	kg/m	Approx. Setting Depth mm	Running of Casing: Drilling or Daywork	WOC Hrs. Cut Off	Drill Out	WOC Time on Contractor or Operator
mm							
<u>12-1/4"</u>	<u>8-5/8"</u>	<u>24 lb.</u>	<u>As determined</u>		<u>8</u>	<u>.12</u>	<u>C</u>
<u>7-7/8"</u>	<u>5-1/2"</u>	<u>20 lb.</u>	<u>by Operator</u>				

It is understood should the picking up and running of tubing be performed after the plug is down on the long string, Contractor shall be deemed to be on daywork and shall be allowed compensation as set forth under the applicable daywork rates.

7. MUD CONTROL PROGRAM (see Section 8.3 of the Drilling Contract)

Operator agrees to furnish all mud conditioners/additives and chemicals necessary for drilling the well and will arrange to purchase all necessary mud conditioning materials.

Depth Interval (metres)		Type Mud	Density kg/m ³	Viscosity s/L	Water Loss cm ³
From	To				
<u>0</u>	<u>Dakota</u>	<u>Salt Water</u>			<u>Water loss</u>
<u>Dakota</u>	<u>T.D.</u>	<u>Gel-Starch</u>			<u>control over the</u>
					<u>bottom 300' only</u>

It is understood, in the event it becomes necessary to discontinue drilling operations and to suddenly raise the mud density 11.0 lb./gal. above the density currently being used or to raise the mud density at any time to 11.0 lb./gal. kg/m³, it will conclusively constitute "abnormal pressure" as that term is employed in Section 9.2 of the Drilling Contract. Operations will thereafter go forward under the terms of such provision Section 9.2 of the Drilling Contract) until such condition has been overcome, the well is under control and the mud system stable. Should the new stabilized density be in excess of 11.0 lb./gal. kg/m³, all subsequent operations shall be conducted on a daywork basis.

Other Mud Specifications: _____

- (g) During the term of the Drilling Contract, the rates set forth herein shall be revised to compensate Contractor for any escalation in its cost of labour, catering, fuel, motor oil, insurance, and transportation should such escalation be general throughout the drilling industry. The date of revision is to be the date of escalation.
- (h) The basis for payment to Contractor for equipment lost or damaged in the hole while on daywork or for equipment lost or damaged in any other circumstances where Operator is liable or responsible for Contractor's equipment under or by reason of any provision of the Drilling Contract shall be 90 percent of new replacement costs at the time of delivery, F.O.B. wellsite.
- (i) Surface Hole Clause 9.2:
All time spent in excess of 12 hours calculated from spud to plug down after the setting and cementing of the surface casing will be charged to Operator at the applicable daywork rate.
Operator will be charged for all bits in excess of One bits to drill the surface hole.
- (j) Loss of circulation time (See Section 9.4 of the Drilling Contract) shall be NTL hours.
- (k) Should Contractor purchase for Operator at Operator's request any materials, supplies, services or equipment, including tubular goods, which Operator is obligated to furnish under the terms of this Agreement, Operator agrees to pay Contractor within thirty (30) days after date of receipt of Contractor's invoice the actual cost of such materials, supplies, services, or equipment, plus NTL % handling charge, and NTL % handling charge for tubular goods.
- (l) Any sum or sums not paid within Sec. 4.2 & 4.3 of contract days after the due date herein specified shall bear interest at the rate of 1-1/2 percent per month from such due date until paid.

14. SPECIAL PROVISIONS:

1. All rig time lost through delays caused by adverse weather conditions will be charged to the Operator on a Daywork basis.
2. Extra labour costs resulting from overtime to run casing, move and rig up or out will be charged to the Operator at cost plus 20% Payroll Burden.
3. All rig time that is employed in waiting on services or supplies, including fuel and water, for reasons beyond the control of Contractor (such as conditions resulting from weather, breakdown of service company equipment, failure of service equipment to arrive on schedule, etc.) shall be charged to the Operator, in addition to the footage price on a daywork basis.
4. In the case of any lost circulation or water flows from any formation, the rig will immediately go on a daywork basis and footage drilled during this period will be deducted from the footage invoice.
5. Any extra costs incurred as a result of any casing failures will be the responsibility of the Operator.
6. Schock-Sub rental will be charged to the Operator.
7. In the event of any casing failure, the rig will immediately go on Daywork.

In response to the above request, our bid for the drilling of the well hereinabove described is submitted as set forth above.

Bird Drilling Inc.

Date: July 2, 1981

ACCEPTED this 23rd day of July

A.D. 19 81

By: [Signature]

Contractor

Texas Oil & Gas Corporation

By: [Signature]

Operator



CONTRACT NUMBER	
OPERATOR	CONTRACTOR

STANDARD DRILLING CONTRACT

THIS AGREEMENT made and entered into by and between Texas Oil & Gas Corporation
2705 Montana Avenue
Suite 300
Billings, Montana 59101 USA
hereinafter called Operator, and Bird Drilling Inc.
800 - 304 - 8th Ave. S.W.
Calgary, Alberta
T2P 1C2
hereinafter called Contractor

WITNESSETH THAT:

WHEREAS Operator is the owner, and/or Operator, of certain property or properties on which it desires to have a well drilled and completed in search of oil or gas; and

WHEREAS Contractor represents that it has adequate equipment in good working order and personnel capable of efficiently operating such equipment with which it desires to drill and complete such well for Operator;

NOW THEREFORE the parties hereto, each in consideration of the covenants and agreements of the other, mutually agree as follows:-

1. WORK TO BE DONE, LOCATION, COMMENCEMENT DATE AND DEPTH:

1.1 Contractor agrees to drill and complete the hereinafter designated well in accordance with all the provisions hereof and other conditions and specifications set forth in the Bid Sheet and Well Specifications, identified as Exhibit A attached to and made part of this Agreement.

1.2 Contractor further agrees to commence operations for the drilling of the well at the location, on the date and to the depth agreed upon in Sections 1, 2 and 3 of Exhibit A hereof.

2. LABOUR, EQUIPMENT, MATERIALS, SUPPLIES AND SERVICES:

2.1 Contractor shall furnish the labour, equipment, materials, supplies and services described in Exhibit A.

2.2 Additional material, equipment, special tools, supplies and services necessary or proper to the drilling and completion of the well shall be furnished at the drill site by the party designated in Section 3 of Exhibit A. Should other tools, materials, equipment, supplies, apparatus or services be necessary to the drilling or completion of the well, the cost of such tools, materials, equipment, supplies, apparatus or services and the manner in which they are to be furnished are to be agreed upon by the parties hereto.

2.3 Operator shall stake the location of the well and shall furnish such labour, materials, supplies and services as are specifically set out in Section 5 of Exhibit A.

2.4 Should Contractor purchase for Operator at Operator's request any materials, supplies, services or equipment, including tubular goods, which Operator is obligated to furnish under the terms of this Agreement, Operator agrees to pay Contractor within thirty (30) days after date of receipt of Contractor's invoice the actual cost of such materials, supplies, services, equipment, or tubular goods, plus handling charge specified in Exhibit A. Contractor agrees to furnish Operator copies of suppliers', vendors' or third party invoices covering such materials, supplies, services or equipment.

3. DRILLING RATE, DAYWORK RATE, STANDBY RATE, BASIS OF DETERMINING AMOUNTS PAYABLE TO CONTRACTOR:

3.1 Subject to all of the other provisions hereof, Operator agrees to pay Contractor for the work performed, services rendered, and the materials, equipment and supplies furnished by Contractor, a sum computed as hereafter prescribed.

3.2 For work performed on a drilling basis, Contractor shall be paid the rate agreed upon and specified in Section 13(a) of Exhibit A, multiplied by the linear measure of the hole drilled. Such linear measure of hole drilled shall be determined in the manner specified in Exhibit A.

3.3 For work performed on a daywork basis, Contractor shall be paid the daywork rate per twenty-four (24) hour day agreed upon and specified in Section 13(b) of Exhibit A.

3.4 If it is necessary to shut down Contractor's rig for repairs while Contractor is performing work on a daywork basis, Contractor shall be allowed compensation in the manner set out in Section 13(d) of Exhibit A.

3.5 When Contractor's rig is shut down, although in readiness to resume operations, but Contractor is awaiting orders of Operator, or materials, services or other items which Operator is obligated to furnish, Operator agrees to pay Contractor the standby rate specified in Section 13(e) of Exhibit A.

3.6 If loss of circulation occurs while operations are being conducted on a drilling basis, all operations until circulation is restored are to be conducted in accordance with the provisions set forth in Section 9 hereof.

3.7 The term "daywork" shall mean the work performed by Contractor at a stipulated sum per day as distinguished from work for which Contractor is compensated at a stipulated price per metre of hole drilled. Unless otherwise provided herein, the term "daywork" shall include, but not be limited to, the following work performed by Contractor:

- All drilling below the contract drilling depth as provided in Exhibit A, including the setting of any string of casing below such depth.
- All work performed by Contractor, whether or not prior to reaching the contract drilling depth, in an effort to restore the hole to such condition that further drilling or other operations may be conducted, in the event of loss or damage to the hole as a result of the failure of Operator's casing or equipment either during or after the running and setting of such casing, or as a result of the subsequent failure of the cementing job resulting in parted casing.
- All other work performed by Contractor at the request of Operator, regardless of depth, which is not within the scope of the work to be performed on a drilling basis including, but not limited to, all coring, drill stem testing, bailing, gun or jet perforating, electric logging, acid treatment, cleaning out, hydraulic fracturing, plugging, running tubing, setting liners, squeeze cementing, abandoning well and installation of well head equipment.

3.8 In determining the amount of daywork time for which Contractor is to be compensated, it is agreed, except as provided in Section 9 hereof, that such daywork time shall begin when Contractor, at the request of Operator, suspends normal drilling operations being conducted on a drilling basis, and shall include the time required to restore the hole to the same drilling conditions which existed when operations on a drilling basis were suspended. For daywork comprising less than a twenty-four (24) hour day, Contractor shall be paid the proper fractional part of the amount specified for a twenty-four (24) hour day. The proper fractional part of the time shall be computed to the nearest one-quarter (1/4) hour.

4. TIME OF PAYMENT:

4.1 Conditional upon Contractor's compliance with the terms and conditions of this Agreement, Operator agrees to make payments to Contractor, as herein set out, until such time as the designated well is completed or abandoned.

4.2 Payment for work performed on a drilling basis shall be due and payable when Contractor completes performance of drilling work provided for by this contract. If Contractor performs any daywork prior to reaching the drilling contract depth, payment for such daywork shall be due and payable at the close of each calendar month.

4.3 If the duration of the hole is more than one month, payment shall be due and payable at the close of each calendar month for the metres drilled in such month.

4.4 Any sum or sums not paid after the due date herein specified shall bear interest at the rate specified in Exhibit A.

5. STOPPAGE OF WORK BY OPERATOR:

5.1 Notwithstanding the provisions of Section 3 of Exhibit A, Operator shall have the right to direct the stoppage of the work to be performed by Contractor hereunder at any time prior to reaching the specified depth, and even though Contractor has made no default hereunder. In such event Operator shall be under no obligation to Contractor except as follows:-

5.2 If such work stoppage occurs prior to spudding of the well, Operator shall pay to Contractor the sum of the following: (a) all expenses reasonably and necessarily incurred by Contractor by reason of the contract and by reason of the premature stoppage of the work excluding, however, expenses of normal drilling crew and supervision; (b) fifteen percent (15%) of the amount of the expenses of item 5.2(a); and (c) a sum calculated at the standby rate with crews for all time from the date upon which Contractor commences any work hereunder down to such date subsequent to the date of work stoppage as will afford Contractor reasonable time to dismantle his rig and equipment.

5.3 If such work stoppage occurs after the spudding of the well, Operator shall pay to Contractor the sum of the following: (a) all expenses reasonably and necessarily incurred by Contractor by reason of the contract and by reason of the premature stoppage of the work excluding, however, expenses of normal drilling crew and supervision; (b) fifteen percent (15%) of the amount of the expenses in item 5.3 (a); and (c) a sum calculated at the daywork rate or standby rate with crews, whichever is applicable at the time, for all time from the date upon which Contractor commences any work hereunder down to such date subsequent to the date of work stoppage as will afford Contractor reasonable time to dismantle his rig and equipment.

6. TAKE-OVER BY OPERATOR:

6.1 In the event of default on the part of Contractor in the performance of the work Operator shall give Contractor written notice thereof which shall specify in detail the nature of the default. Contractor shall have seven (7) days after receipt of such notice in which to correct or remedy the matter specified in such notice. If Contractor within the said seven (7) days period fails to correct or remedy the matter specified in such notice to Operator's satisfaction, Operator may take possession of any or all of Contractor's tools, rig, machinery and equipment at the well site and, with Operator's own employees or the employees of some other contractor, complete all or any portion of the work contemplated by this Agreement. If Operator takes over Contractor's tools, rig, machinery and equipment as herein provided, Operator shall pay Contractor during such take-over the standby with crew rate as provided in Section 13(d) of Exhibit A, less Operator's direct labour charges.

6.2 Operator shall, either at the completion or abandonment of the hole or in accordance with item 6.5 hereof, whichever is the sooner, return to Contractor all tools, rig, machinery and equipment so taken over in as good condition as when taken over, normal wear and tear excepted.

6.3 If Contractor carries insurance on Contractor's tools, rig, machinery and equipment such insurance shall be continued in effect during such take-over and Operator shall reimburse Contractor for the cost of such insurance during such take-over.

6.4 If Contractor's tools, rig, machinery and equipment are taken over by Operator as herein provided, all operations performed therewith during such take-over period shall be wholly at Operator's risk. Contractor's covenants of indemnity contained in this Agreement shall not apply during such take-over period.

6.5 If, after Operator has taken over possession of any or all of Contractor's tools, rig, machinery and equipment as herein provided, Contractor demonstrates to the satisfaction of Operator that Contractor can correct or remedy the matter specified on Operator's notice pursuant to item 6.1 above, Operator shall return to Contractor all tools, rig, machinery and equipment so taken over and thereafter the provisions of this Agreement shall again apply.

7. CASING PROGRAM:

7.1 The casing program shall be as provided in Section 6 of Exhibit A. The exact setting depth of each string of casing, the amount of cement, and the process to be used in cementing shall be specified by Operator at the time of each casing setting. Operator may modify said casing program but any modification thereof which materially increases Contractor's hazard or costs of performing its obligations hereunder can only be made by mutual agreement of Contractor and Operator.

7.2 Contractor shall run and cement all strings of casing and shall be compensated therefor either at drilling rates or at daywork rates as set out in Section 6 of Exhibit A. If casing is run and cemented at drilling rates, Contractor shall at its expense condition the hole (except following daywork operations), run and cement the casing and wait on cement to harden, with prescribed waiting time to commence when plug hits bottom. If casing is run and cemented at daywork rates, Contractor shall be paid for all time consumed in the process at applicable daywork rates. Recementing or time requested by Operator in excess of allowed cement hardening time shall be paid at applicable daywork rates. The setting of any string of casing below the contract depth shall be performed by Contractor under the direction of Operator and Operator shall pay for all time so consumed at the applicable daywork rate.

7.3 Contractor agrees to keep thread protectors on the casing until the casing is taken from the racks to be run into the hole, and to grease the thread with a suitable pipe lubricant as it is made up. Contractor further agrees to preserve all protectors and, after well is completed, to break down all surplus casing, put protectors on same as it is broken down and return such casing to the pipe racks at the rig.

7.4 If the hole is lost or damaged as a result of the failure of Operator's casing or equipment either during the running and setting of such casing or as a result of subsequent failure of the cement job or as a result of casing wear, such loss shall be borne by Operator.

8. DRILLING METHODS AND PRACTICES:

8.1 Contractor agrees to perform all work to be conducted by it under the terms of this Agreement with due diligence and care in a good and workmanlike manner and in accordance with good drilling practices.

8.2 Contractor agrees to maintain its well control equipment in good operating condition at all times, testing it as prescribed in Section 4 of Exhibit A, and shall use all reasonable means to control and prevent fire and blowouts.

8.3 Subject to the terms hereof, Contractor agrees that at all times during the drilling of the well the Operator shall have the right to control the mud program. The drilling fluid must be of a type and have characteristics acceptable to Operator and be maintained by Contractor in accordance with the specifications shown in Section 7 of Exhibit A. No change or modification of said specifications which would materially increase Contractor's hazards or Contractor's costs of performing its obligations hereunder shall be made by Operator without consent of Contractor. Both Contractor and Operator shall have the right to make any tests of the drilling fluid which may be necessary. Should no mud control program be specified by Operator in Exhibit A, Contractor shall have the right to determine the mud program and the type and character of the drilling fluid during the time that Contractor is performing work upon a drilling basis under the terms of this Agreement.

8.4 Contractor agrees to keep a drilling time log of the well noting the depth and to save and label samples of formations as Operator may request. Such log shall at all times be subject to inspection of Operator or its representative; and, upon completion or abandonment of the well to which it pertains, shall become the exclusive property of Operator.

8.5 Contractor agrees that every effort will be made to drill a straight hole and to make diligent effort to maintain its slope within the allowable limits specified in Exhibit A. Contractor agrees to make slope tests as specified in Section 8 of Exhibit A, with the cost of making such slope tests to be included in the drilling rate if the well is being drilled on a drilling basis. If the slope of the hole is found to be beyond the limits specified in Exhibit A while work is being conducted on a drilling basis and if requested by Operator prior to running casing, Contractor agrees at its cost to cement off, redrill, or correct the slope of the hole to the satisfaction of Operator. Operator reserves the right to require slope tests additional to those specified in Exhibit A. In making such additional slope tests, if it is found that the slope of the hole is beyond the prescribed limits set forth in Exhibit A, the cost of such tests is to be borne by Contractor; and, if requested by Operator, prior to running casing, Contractor agrees at its own cost to cement off, redrill or correct the slope of the hole to Operator's satisfaction. If the slope of the hole is found to be within the prescribed limits of Exhibit A, rig time used to make the test shall be paid for at the applicable daywork rate.

9. FORMATIONS DIFFICULT OR HAZARDOUS TO DRILL:

9.1 If chert, pyrite, quartzite, igneous rock or other impervious substances are encountered while drilling on a drilling basis and the metres drilled during each twenty-four (24) hour period multiplied by the drilling rate does not equal the applicable daywork rates plus the costs of bits, all drilling operations shall be conducted on a daywork basis at the applicable daywork rate with the Operator furnishing the bits until normal drilling operations and procedures can be resumed. The metres so drilled on daywork shall be deducted from the drilling charge.

9.2 If gravel, boulders, loss of circulation or deviation difficulties due to gravel or flowing water is encountered during the drilling of the surface hole, all time spent in excess of hours as set forth in Exhibit A, calculated from spud to plug down after the setting and cementing of surface casing will be charged to Operator at the applicable daywork rate. Operator will be charged for all bits in excess of number of bits as set forth in Exhibit A to drill the surface hole. In addition, the applicable drilling rate will apply to the total depth of the surface hole should such conditions prevail during the drilling of the surface hole.

9.3 If water flow, domal formation, abnormal pressure, underground mine or cavern, heaving shale, coal, or other similar condition is encountered under the surface casing shoe which makes drilling abnormally difficult or hazardous, causes sticking of drill pipe or casing, or other similar difficulty which precludes drilling ahead under reasonably normal procedures, Contractor shall, in all cases, without delay, exert every reasonable effort to overcome such difficulty and so notify Operator. When such conditions are encountered, further operations shall be conducted on a daywork basis at the applicable daywork rate until such conditions have been overcome and normal drilling operations can be resumed. Operator shall assume the risks of loss of or damage to the hole and to Contractor's equipment in the hole from the time such condition is encountered. The metres drilled while on such daywork operations shall be deducted from the drilling charge.

9.4 If loss of circulation or partial loss of circulation is encountered under the surface casing shoe, Contractor shall, without undue delay, exert every reasonable effort to overcome such difficulty. Immediately when such condition is encountered, Operator shall assume the risks of loss of or damage to the hole and to Contractor's equipment in the hole. Should such condition persist in spite of Contractor's efforts to overcome it, then after a cumulative period of time has been consumed in such efforts, further operations shall be conducted on a daywork basis at the applicable daywork rate until such condition has been overcome and normal drilling operations can be resumed.

10. CORINGS AND CUTTINGS:

10.1 Contractor agrees to take cores as set out in Section 9 of Exhibit A and, in so doing, to utilize a type of equipment specified therein. All coring shall be paid for at the applicable daywork rate unless otherwise specified in Exhibit A.

11. REPORTS TO BE FURNISHED BY CONTRACTOR:

11.1 Contractor shall keep and furnish to Operator a daily drilling report showing depth of the hole and such other data as required by Operator. Drilling report forms shall be furnished or specified by Operator. In the absence of specifications by Operator, the C.A.O.D.C. Daily Drilling Report Form shall be used.

11.2 Delivery tickets covering any materials or supplies furnished by Operator or furnished by vendors for which Operator is obligated to reimburse Contractor and showing the quantity, description and condition of materials and supplies so furnished shall be verified and visually checked as to receipt by Contractor's representative.

12. INSURANCE AND INDEMNITY:

12.1 At all times during the term of this Agreement, Contractor agrees to carry insurance of types and in minimum amounts as follows:

- (a) Comprehensive General Liability Insurance with limits of \$300,000 inclusive, for bodily injury and property damage, or with limits as specified in Exhibit A hereto.
- (b) Employer's Liability Insurance with limits of \$300,000 inclusive, for bodily injury and property damage, or with limits as specified in Exhibit A hereto.
- (c) Automobile Liability Insurance with limits of \$300,000 inclusive, for bodily injury and property damage, or with limits as specified in Exhibit A hereto.
- (d) Adequate Worker's Compensation Insurance covering all Contractor's employees working under this Agreement which complies with Provincial, Territorial or Federal laws and regulations applicable to this Agreement.
- (e) Other insurance as specified in Exhibit A hereto.
- (f) All such insurance shall be carried in a company or companies acceptable to Operator and shall be maintained in full force and effect during the term of this Agreement. Contractor agrees to have its insurance carrier and/or agent furnish Operator with a certificate or certificates evidencing insurance coverage in accordance with the above requirements.

12.2 In the event Contractor is a self-insurer and Operator has consented to Contractor being a self-insurer as to any one or more of the risks as to which coverage is herein required, evidence of such consent must be in writing and approved by a representative of Operator authorized to enter into such consent agreement.

12.3 Each party shall furnish to the other, on written request, copies of all its insurance policies relating to its operations hereunder and, if charged to the other party, premium receipts in respect thereof.

12.4 All insurance taken out by Contractor hereunder and any insurance taken out by Operator relating to this Agreement or any related subcontract shall be for the benefit of both parties. Provision shall be made that the underwriters thereof waive their rights of recourse against the other party hereto and against all persons for whom such other party is responsible in connection with this Agreement.

13. TAXES AND CLAIMS:

13.1 Contractor agrees to pay all taxes, licenses and fees levied or assessed on Contractor in connection with or incidental to the performance of this contract by any governmental agency for unemployment compensation insurance, old age benefits or any other taxes upon the wages of Contractor, its agents, employees, or representatives. Contractor agrees to require the same agreements and be liable for any breach of such agreements by any of its subcontractors.

13.2 Contractor agrees to pay all claims for labour, material, services and supplies furnished by Contractor hereunder and agrees to allow no lien or charge to be fixed upon the lease, the well or the land on which the well is to be drilled. Contractor agrees to indemnify, protect and save Operator harmless from and against all such claims and liens. If Contractor shall fail or refuse to pay any bona fide claims or indebtedness incurred by Contractor in connection with the drilling of any well or wells hereunder, it is agreed that Operator shall have the right to pay any such bona fide claims or indebtedness out of any money due or to become due to Contractor hereunder. No assignment or transfer by Contractor of rights to monies due Contractor hereunder shall have any force or effect as far as Operator's rights are concerned until all such claims and indebtedness incurred by Contractor shall have been completely liquidated and discharged.

13.3 Operator may require Contractor to furnish proof that there are no unsatisfied claims for labour, materials, services and supplies.

13.4 Operator may withhold a percentage of the price agreed to be paid Contractor for the purpose, in the manner, and for the time provided in applicable mechanic's or builder's lien legislation of the area where the work is performed, said percentage to be ultimately released in accordance with such legislation.

14. RESPONSIBILITY FOR LOSS OF OR DAMAGE TO THE EQUIPMENT OR TO THE HOLE:

14.1 Contractor's Surface Equipment: Contractor shall be liable at all times for damage or destruction of Contractor's surface equipment including all drilling tools, machinery, and appliances for use above the surface, and for any other type of equipment, including in-hole equipment when such in-hole equipment is above the surface regardless of when or how such damage or destruction occurs except loss or damage thereto caused by the gross negligence or wilful acts or omissions of Operator or Operator's agents, servants or employees or any loss or damage thereto occurring during the time that operations have been taken over by Operator as provided in Paragraph 6 hereof and except as provided in Paragraph 14.4 and 18.2 hereof.

14.2 Contractor's In-Hole Equipment — Drilling Basis: Contractor shall be liable at all times while work is being performed on a drilling basis for loss of, damage to or destruction of Contractor's in-hole equipment, including drill pipe, drill collars and tool joints. Operator shall be under no liability to reimburse Contractor for any such loss, damage or destruction except such as is caused by gross negligence or wilful acts or omissions of Operator or Operator's agents, servants or employees.

14.3 Contractor's In-Hole Equipment — Day Work Basis: Operator shall assume liability at all times for damage to or destruction of Contractor's in-hole equipment while such equipment is below the surface including but not limited to drill pipe, drill collars and tool joints, regardless of fault or negligence or alleged fault or negligence. The basis of reimbursement shall be as specified in Section 13(h) of Exhibit A.

14.4 Contractor's Equipment — Environmental Loss or Damage: Operator shall assume liability at all times and reimburse Contractor for damage to or destruction of Contractor's equipment both surface and in-hole equipment caused by exposure to corrosive or otherwise destructive or abrasive elements which are introduced into the drilling fluid from subsurface formations or the use of corrosive, destructive or abrasive additives in the drilling fluid. The basis of reimbursement shall be as specified in Section 13(h) of Exhibit A.

14.5 Operator's Equipment: All machinery, tools, material and equipment furnished by Operator shall, at the completion or abandonment of the well, be returned to Operator in as good condition as when received by Contractor, ordinary wear and tear excepted; provided that Contractor shall not be liable to Operator for any loss or damage to such machinery, tools, material and equipment over and beyond ordinary wear and tear except that due to gross negligence of Contractor and Contractor's employees.

14.6 The Hole — Drilling Basis: Except as provided in Section 9 and Section 14.8 hereof, should the hole for any cause attributable to Contractor's operations be lost or damaged while Contractor is engaged in the performance of work hereunder on a drilling basis, all such loss or damage to the hole shall be borne by the Contractor; and if the hole as the result of such cause is not in condition to be carried to the contract depth as herein provided, Contractor shall, if requested by Operator, commence a new hole without delay at Contractor's cost; and the drilling of the new hole shall be conducted under the terms and conditions of this contract in the same manner as though it were the first hole. In such case Contractor shall not be entitled to any payment or compensation for expenditures made or incurred by Contractor on or in connection with the abandoned hole, except for daywork earned in coring, testing, logging, or other daywork for which Contractor would have been compensated had such hole not been junked and abandoned.

14.7 The Hole — Daywork Basis: In the event the hole is lost or damaged while Contractor is working on a daywork basis or as a result of work performed on a daywork basis, Operator shall be responsible for such loss or damage to the hole including casing in the hole and any underground reservoir formation or stratum; and if the hole as the result of such cause is not in condition to be carried to the contract depth as herein provided, Contractor shall, if requested by Operator, commence a new hole without delay at Operator's cost; and the drilling of the new hole shall be conducted under the terms and conditions of this contract in the same manner as though it were the first hole.

14.8 Liability for Wild Well: Operator shall be liable for the cost of gaining control of any wild well, as well as the cost of removal of any debris and re-drilling expenses and Operator shall indemnify and save harmless Contractor against and from all such costs.

14.9 Personnel: Each party shall be responsible at all times for, and shall hold harmless and indemnify the other party from and against, loss of life or personal injury to its own personnel regardless of fault or negligence or alleged fault or negligence.

15. INDEPENDENT CONTRACTOR RELATIONSHIP:

15.1 Contractor shall be an independent contractor with respect to performance of all work hereunder and neither Contractor nor anyone employed by Contractor shall be deemed for any purpose to be the employee, agent, servant or representative of Operator in the performance of any work or service or any part thereof in any manner dealt with hereunder. Operator shall have no direction or control of Contractor or its employees and agents except in the results to be obtained. The work contemplated herein shall meet the approval of Operator and be subject to the general right of inspection herein provided for Operator to secure the satisfactory completion thereof.

16. LAWS, RULES AND REGULATIONS:

16.1 Contractor and Operator respectively agree to comply with all laws, rules and regulations, Federal, Provincial and Territorial, which are now or may become applicable to operations covered by this agreement or arising out of the performance of such operations.

17. FORCE MAJEURE:

17.1 Neither Operator nor Contractor shall be liable for failure to perform its obligations under this Agreement when performance is hindered or prevented by strikes, lock-outs, riots, war (declared or undeclared), acts of God, insurrection, fire, storm, hurricane, orders or regulations of any governmental authority, delays in transportation, inability to obtain the necessary materials and supplies on the open market or any other cause, whether similar or dissimilar to those specifically enumerated, beyond the reasonable control of the party affected; but lack of funds shall not be considered a cause beyond the reasonable control of a party. The performance of any such suspended obligation shall be resumed as soon as reasonably possible after such cause ceases to exist. Nothing in this item 15.1 shall relieve (a) Operator of its obligation under this Agreement to pay the appropriate dayrate(s) or (b) either party of its respective indemnification provisions specified in this Agreement.

18. SOUND LOCATION, INGRESS AND EGRESS:

18.1 Operator shall secure for Contractor rights of ingress and egress to the tract of land on which the well is to be drilled. Operator shall advise Contractor of any limitations or restrictions affecting ingress and egress and Contractor shall abide by such limitations or restrictions. Should Contractor be denied free access to the location for any reason not within the control of Contractor, time lost by such denial shall be paid for at a rate in keeping with the stage of operations at the time.

18.2 Operator shall be responsible (except as otherwise noted in Section 5 of Exhibit A) for preparing a sound location fully capable of supporting a drilling rig of the type and size specified in Exhibit A as well as a fully adequate conductor pipe program to assure that any soil or subsoil will not wash out. It is also recognized that Operator has superior knowledge of the location and must advise Contractor of any known subsurface conditions such as, but not limited to, mines, caverns, streams or springs that might be encountered which result in the cratering or the shifting of the location surface during the course of operations. If such conditions are encountered and result in the cratering or shifting of the location surface, Operator shall assume responsibility and pay all cost necessary to protect the drilling rig, its associated equipment and personnel from damage or harm. Operator shall be liable for all loss resulting from the conditions referred to in this paragraph and shall protect, indemnify and save harmless Contractor from and against all claims, demands and causes of action of any nature arising therefrom, including all associated legal costs.

19. POLLUTION AND CONTAMINATION:

19.1 It is understood and agreed by and between both parties that the responsibility for pollution or contamination shall be as follows:-

(a) Contractor shall assume responsibility for, including the control and removal of, and protect, defend and save harmless Operator against, all claims, demands and causes of action of every kind and character arising from pollution or contamination which originates above the surface of the ground from spills of fuels, lubricants, motor oils, wire cuttings, pipe dope, water, paints, solvents and garbage wholly in possession and control and directly associated with Contractor's equipment and facilities; expressly excepting slush pit breakage or seepage.

(b) Operator shall assume responsibility for, including control and removal of, and protect, defend and save Contractor harmless from and against, all claims, demands and causes of action of every kind and character arising from all other pollution or contamination which occurs during the conduct of operations hereunder including, but not limited to, that which may result from slush pit breakage or seepage, fire, blowout, cratering, or any other uncontrolled flow of oil, gas, water or other substance as well as the use or disposition of oil emulsion, water or oil-base chemically treated drilling fluids, cuttings or caving and lost circulation materials or fluids, and the items of equipment wholly in possession and control of Operator and directly associated with Operator's equipment or facilities. Operator shall provide a suitable site for the removal, burning or burying of any garbage, oil waste products or other similar pollutants normally associated with a drilling rig operation. The site so designated shall be built at the sole cost of Operator; Contractor shall be advised by Operator as to any Provincial, Territorial or Federal regulations governing the use of such a site; Operator shall protect, indemnify and save harmless Contractor from and against all claims arising from its use.

20. PATENTS AND LICENSES:

20.1 Contractor represents and warrants that the use or construction of any and all tools and equipment furnished by Contractor and used in the work provided for herein does not infringe on any license or patent which has been issued or applied for. Contractor agrees to indemnify and hold Operator harmless from any and all claims, demands, and causes of action of every kind and character in favor of or made by any patentee, licensee or claimant of any right or priority to any such tool or equipment, or the use or construction thereof, which may result from or arise out of the furnishing or use of any such tool or equipment by Contractor in connection with the work under this agreement.

21. INFORMATION CONFIDENTIAL:

21.1 All information obtained by Contractor in the conduct of drilling operations on this well including, but not limited to, depth, formations penetrated, the results of coring, testing, surveying, the running of casing and the running of abandonment plugs, shall be considered confidential and shall not be divulged by Contractor, or his employees, to any person, firm or corporation other than Operator's designated representative.

22. ENTIRE AGREEMENT:

22.1 This agreement (including Exhibit A hereto) constitutes the entire agreement between Operator and Contractor in connection with the subject matter hereof and supersedes all prior agreements, arrangements, negotiations, representations or understandings by or between them, whether written or otherwise.

23. INTERPRETATION:

23.1 Whenever the singular or masculine or neuter is used in this agreement, the same shall be construed as meaning plural, feminine or body politic or corporate and vice versa where the context so requires.

WITNESS the signatures of the parties hereto in DUPLICATE ORIGINALS, this 23rd

day of July, A.D. 19 81

WITNESS: (unless signed under seal)

E. H. Hays

Operator

By: [Signature]

By: _____

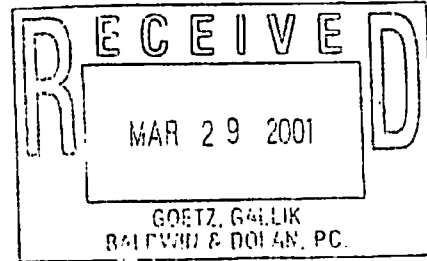
WITNESS: (unless signed under seal)

[Signature]

Bird Drilling Inc.
Contractor

By: [Signature]

By: [Signature]



1 Gerald B. Murphy
2 Gerry Fagan
3 MOULTON, BELLINGHAM, LONGO
4 & MATHER, P.C.
5 Suite 1900, Sheraton Plaza
6 P. O. Box 2559
7 Billings, Montana 59103-2559
8 Telephone (406) 248-7731

9 Attorneys for Defendant Marathon Oil

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
BILLINGS DIVISION

11 CARY G. YOUPEE; D. DWIGHT YOUPEE;
12 JOSI YOUPEE; RENE MARTELL; MARVIN K.
13 YOUPEE, SR. individually and as representative
14 and next friend of MARVIN YOUPEE, JR.,
15 WILLIAM YOUPEE III, IRIS YOUPEE, and
16 BRITTANY YOUPEE; EUGENE ABBOTT;
17 MARGARET ABBOTT; CHARLES FOUR
18 BEAR, individually and next friend of JORAY
19 FOUR BEAR, JONATHON LITTLE
20 WHIRLWIND, AVA LEE LITTLE WHIRLWIND
21 AND CHARLES FOUR BEAR II; ANNA FOUR
22 BEAR; GEORGE F. RICKER, SR.; HELEN
23 RICKER; GEORGE F. RICKER, JR., individually
24 and as next friend of ERIN RICKER; WILLIAM
25 T. RICKER; ABIGAIL REDDOOR; IRMA
REDDOOR; LAURA BLEAZARD, individually
and as representative and next friend of DAVID
BLEAZARD; ROSS BLEAZARD; ERICA
BLEAZARD; TRIVIAN GRAINGER individually
and as representative and next friend of
DANIEL GRANGER and ADAM GRAINGER;

Cause No. CV-98-108-BLG-JDS

Judge Jack D. Shanstrom

ANSWER OF MARATHON OIL
COMPANY TO PLAINTIFFS'
SEVENTH AMENDED COMPLAINT
AND DEMAND FOR JURY TRIAL

1 DAVID GRAINGER; DAWN GRAINGER;
2 DENISE GRAINGER, individually and as
3 representative and next friend of JAY
4 GRANDCHAMP and TINA KOHL; DONNA
BUCKLES-WHITMER; WARREN WHITMER;
and ALLEN YOUPEE

5 Plaintiffs,

6 -vs-

7 MURPHY EXPLORATION & PRODUCTION
8 CO., a Delaware Corporation; MESA
9 PETROLEUM CO., a Delaware Corporation;
10 PIONEER NATURAL RESOURCES USA, INC.,
a Delaware Corporation; SAMSON
HYDROCARBONS COMPANY, an Oklahoma
Corporation; MARATHON OIL, an Ohio
Corporation; and JOHN DOES 10 through 50,

11 Defendants.
12

13 Defendant, Marathon Oil Company ("Marathon"), answers Plaintiffs' Seventh
14 Amended Complaint as follows:

15 1. Marathon is without sufficient knowledge to form a belief as to the truth of the
16 allegations of paragraphs 1 through 22 and therefore denies the same.

17 2. Marathon admits the allegations of paragraph 23.

18 3. Marathon is without sufficient knowledge to form a belief as to the truth of the
19 allegations of paragraph 24 and therefore denies the same.

20 4. Answering paragraph 25, Marathon admits that its predecessor-in-interest
21 owned and operated oil and gas production facilities located within Township 28 North,
22 Range 51 East, Roosevelt County, Montana, including some of those facilities alleged in
23 paragraph 25. Marathon specifically denies that it and/or its predecessor-in-interest
24 operated at any time any facility asserted by Plaintiffs which caused or contributed to
25 groundwater contamination as alleged by Plaintiffs.

1 5. Marathon admits the allegations of paragraph 26.

2 6. Answering paragraph 27, Marathon admits that its predecessor-in-interest
3 conducted oil and gas exploration and production activity in the East Poplar Oil Field and
4 engaged in some of the activities alleged in paragraph 27. Marathon specifically denies
5 that it and/or its predecessor-in-interest engaged at any time in any of the activities asserted
6 by Plaintiffs which caused or contributed to groundwater contamination as alleged by
7 Plaintiffs.

8 7. Marathon denies the allegations of paragraph 28.

9 8. Answering Paragraph 29, Marathon denies that it and/or its predecessor-in-
10 interest caused or contributed to groundwater contamination, as alleged by Plaintiffs.
11 Marathon is without sufficient knowledge to form a belief as to the truth of the remaining
12 allegations contained in paragraph 29 and therefore denies the same.

13 9. Marathon denies the allegations of paragraphs 30 and 31. Marathon
14 specifically denies that it and/or its predecessor-in-interest engaged at any time in any of
15 the activities asserted by Plaintiffs which caused or contributed to groundwater
16 contamination, as alleged by Plaintiffs.

17 10. The allegations contained in paragraphs 32 through 34 are derived from
18 documents issued by the United States Geological Survey ("USGS") and the Environmental
19 Protection Agency ("EPA"). Those documents concern those entities' studies and
20 investigations into the quality of the groundwater in the East Poplar Oil Field and require no
21 response from Marathon, as the documents speak for themselves. Marathon specifically
22 denies that it and/or its predecessor-in-interest caused or contributed to groundwater
23 contamination, as alleged by Plaintiffs, in the East Poplar Oil Field and denies that any
24 study or investigation by the USGS or EPA concluded that Marathon or its predecessor-in-
25 interest did so. To the extent that the allegations contained in paragraphs 32 through 34

1 further imply liability on the part of Marathon and/or its predecessor-in-interest, Marathon
2 denies them.

3 11. Marathon is without sufficient knowledge to form a belief as to the truth of the
4 allegations contained in paragraphs 35 and 36 and therefore denies the same.

5 12. The allegations contained in paragraphs 37 and 38 are derived from
6 documents issued by the EPA concerning its investigation into the quality of the
7 groundwater in the East Poplar Oil Field and require no response from Marathon, as the
8 documents speak for themselves. Marathon specifically denies that it and/or its
9 predecessor-in-interest caused or contributed to groundwater contamination, as alleged by
10 Plaintiffs, in the East Poplar Oil Field and denies that any investigation by the EPA
11 concluded that Marathon or its predecessor-in-interest did so. Marathon further denies that
12 the First Amended Emergency Administrative Order ("EAO") contained the same Orders
13 as the original EAO. To the extent that the allegations contained in paragraphs 37 and 38
14 further imply liability on the part of Marathon and/or its predecessor-in-interest, Marathon
15 denies them.

16 13. Answering paragraph 39, Marathon admits that it received a copy of Plaintiffs'
17 Notice of Intent to File Citizen Suit. Marathon is without sufficient knowledge to form a
18 belief as to the truth of the remaining allegations contained in paragraph 39 and therefore
19 denies the same.

20 14. Marathon admits paragraph 40.

21 15. Marathon is without sufficient knowledge to form a belief as to the truth of the
22 allegations contained in paragraph 41 and therefore denies the same.

23 16. Marathon denies the allegations of paragraphs 42 and 43.
24
25

1 COUNT ONE (NEGLIGENCE)

2 17. Answering paragraph 44, Marathon restates its responses to the allegations
3 of paragraphs 1 through 43.

4 18. Marathon denies the allegations of paragraph 45.

5 COUNT TWO (RES IPSA LOQUITUR)

6 19. Answering paragraph 46, Marathon restates its responses to the allegations
7 of paragraphs 1 through 45.

8 20. Marathon denies the allegations of paragraph 47. Marathon further denies
9 that the doctrine of *Res Ipsa Loquitur* is applicable to the claims asserted by Plaintiffs.

10 COUNT THREE (NUISANCE)

11 21. Answering paragraph 48, Marathon restates its responses to the allegations
12 of paragraphs 1 through 47.

13 22. Marathon denies the allegations of paragraphs 49 through 54.

14 COUNT FOUR (STRICT LIABILITY)

15 23. Answering paragraph 55, Marathon restates its responses to the allegations
16 of paragraphs 1 through 54.

17 24. Marathon denies the allegations of paragraph 56. Marathon further denies
18 that the doctrine of strict liability is applicable to the claims asserted by Plaintiffs.

19 COUNT FIVE (TRESPASS)

20 25. Answering paragraph 57, Marathon restates its responses to the allegations
21 of paragraphs 1 through 56.

22 26. Marathon denies the allegations of paragraphs 58 through 61.

23 COUNT SIX (UNJUST ENRICHMENT)

24 27. As to paragraph 62, Marathon restates its responses to the allegations of
25 paragraphs 1 through 61.

1 - 28. Marathon denies the allegations of paragraphs 63 through 65. Marathon
2 further denies that the doctrine of unjust enrichment is applicable to the claims asserted by
3 Plaintiffs.

4 **COUNT SEVEN (PUNITIVE DAMAGES)**

5 29. Answering paragraph 66, Marathon restates its responses to the allegations
6 of paragraphs 1 through 65, and incorporates its responses to the allegations of paragraphs
7 68 through 84.

8 30. Marathon denies the allegations of paragraph 67.

9 **COUNT EIGHT (VIOLATION OF MONTANA CONSTITUTION)**

10 31. Answering paragraph 68, Marathon restates its responses to the allegations
11 of paragraphs 1 through 67, and incorporates its responses to the allegations of paragraphs
12 72 through 84.

13 32. Answering paragraphs 69 through 71, Marathon admits that the Constitution
14 of Montana provides that each person is entitled to a clean and healthful environment.
15 Marathon denies the remaining allegations contained in paragraphs 69 through 71.
16 Marathon further denies that the Constitution of Montana provides a private cause of action
17 to support the claims asserted by Plaintiffs.

18 **COUNT NINE (ATTORNEYS' FEES)**

19 33. Answering paragraph 72, Marathon restates its responses to the allegations
20 of paragraphs 1 through 71, and incorporates its responses to the allegations of paragraphs
21 75 through 79.

22 34. Marathon denies the allegations contained in paragraphs 73 and 74.
23 Marathon further denies that the Constitution of Montana provides a private cause of action
24 to support the claims asserted by Plaintiffs or the award of attorneys' fees.
25

1 COUNT 10 (MEDICAL MONITORING)

2 35. Answering paragraph 75, Marathon restates its responses to the allegations
3 contained in paragraphs 1 through 74.

4 36. Marathon denies the allegations contained in paragraphs 76 through 79.

5 COUNT ELEVEN (VIOLATION OF FEDERAL SAFE DRINKING WATER ACT)

6 37. Answering paragraph 80, Marathon restates its responses to the allegations
7 contained in paragraphs 1 through 79.

8 38. Marathon denies the allegations contained in paragraphs 81 and 82.

9 39. Answering paragraph 83, Marathon is without sufficient knowledge to form a
10 belief as to the truth of the allegations that the quaternary deposits supplied drinking water
11 to the Plaintiffs, or to others living in or around the East Poplar Oil Field, or to the City of
12 Poplar, Montana, and therefore denies the same. Marathon denies that it or its
13 predecessor-in-interest caused or contributed to the contamination alleged by Plaintiffs. As
14 to the allegation that the quaternary deposits are an underground source of drinking water
15 as defined by 40 C.F.R. § 144.3, that allegation is a conclusion of law and does not require
16 a response by Marathon.

17 40. Marathon denies the allegation contained in paragraph 84.

18 DEFENSES AND AFFIRMATIVE DEFENSES

19 41. Any and all allegations directed to Marathon which are not specifically
20 admitted by Marathon are denied.

21 42. Plaintiffs' Complaint fails to state a claim upon which relief can be granted.

22 43. Plaintiffs' claims are barred, in whole or in part, by applicable statutes of
23 limitation.

24 44. Plaintiffs' claims are barred, in whole or in part, by laches and/or estoppel.

1 45. Plaintiffs' damages, if any, were caused by persons or entities other than
2 Marathon.

3 46. If liability is assessed in any respect, then the fault of all parties, joined and
4 unjoined, must be evaluated and liability apportioned among all persons and entities
5 according to their respective fault.

6 47. Any and all damages purportedly sustained were the proximate result of the
7 independent and intervening acts, conduct, fault, negligence, breach of duty or misconduct
8 by persons or entities other than the Defendants.

9 48. The imposition of punitive damages under the facts alleged in this case
10 violates the Fourth, Fifth, Sixth, Eighth and Fourteenth Amendments to the United States
11 Constitution and violates Article II, Sections 4, 17, 22 and 25 of the Constitution of Montana.

12 49. Marathon and/or its predecessor-in-interest were not negligent and their
13 actions in this case conformed with the standard of care applicable to this case.

14 50. Marathon and/or its predecessor-in-interest conducted their operations in full
15 compliance with the applicable state and federal regulations in place at that time.

16 51. Plaintiffs voluntarily assumed the risk of events, occurrence and damages
17 alleged in the Complaint so that any damages recoverable are either precluded or
18 diminished.

19 52. The Constitution of Montana does not provide a private cause of action to
20 support Plaintiffs' causes of action or request for attorneys' fees.

21 53. The doctrines of *res ipsa loquitur*, strict liability, and unjust enrichment are not
22 applicable to Plaintiffs' claims.

23 54. Marathon reserves the right to add such additional and different defenses as
24 may be appropriate upon completion of its investigation and discovery in this matter.
25

1 WHEREFORE, having fully answered Plaintiffs' Seventh Amended Complaint,
2 Marathon prays that Plaintiffs' Complaint be dismissed, with prejudice, and that Plaintiffs
3 take nothing thereby, that judgment be entered in favor of Marathon, and that Marathon
4 recover its reasonable costs incurred herein, and for such other and further relief as the
5 Court deems just.

6 DEFENDANT DEMANDS TRIAL BY JURY

7 DATED this 26th day of March, 2001.

8 MOULTON, BELLINGHAM, LONGO
9 & MATHER, P.C.

10
11 By: 

12 GERALD B. MURPHY
13 GERRY FAGAN
14 Suite 1900, Sheraton Plaza
15 P.O. Box 2559
16 Billings, MT 59103-2559
17 ATTORNEYS FOR DEFENDANT
18 MARATHON OIL COMPANY
19
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21
22
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25

1 CERTIFICATE OF SERVICE

2 I hereby certify that a true and accurate copy of the foregoing was duly served upon
3 the following persons and counsel of record by depositing the same, postage prepaid, in
4 the United States mail this 26th day of March, 2001.

5 Richard J. Dolan
6 Brian K. Gallik
7 GOETZ, GALLIK, BALDWIN & DOLAN, P.C.
8 35 North Grand
P.O. Box 428
Bozeman, MT 59771-0428

9 Michael E. Webster
10 Carolyn Ostby
11 CROWLEY, HAUGHEY, HANSON,
12 TOOLE & DIETRICH, P.L.L.P.
13 500 TransWestern Plaza II
490 North 31st Street
P.O. Box 2529
Billings, MT 59103-2529

14 John Walker Ross
15 BROWN LAW FIRM, P.C.
16 315 North 24th Street
P.O. Box 849
Billings, MT 59103-0849

17 Robert Sterup
18 DORSEY & WHITNEY LLP
19 1200 First Interstate Center
401 North 31st Street
P.O. Box 7188
Billings, MT 59103-7188

20 By: _____
21
22
23
24
25

1 Richard J. Dolan
2 Brian K. Gallik
3 GOETZ, GALLIK, BALDWIN & DOLAN, P.C.
4 35 North Grand
5 P.O. Box 6580
6 Bozeman, MT 59771-6580
7 (406) 587-0618

8 ATTORNEYS FOR PLAINTIFFS

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IN THE UNITED STATES DISTRICT COURT
FOR THE STATE OF MONTANA
BILLINGS DIVISION

* * * * *

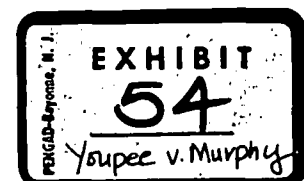
Cause No. CV-98-108-BLG-JDS

CARY G. YOUPEE; D. DWIGHT YOUPEE;
JOSI YOUPEE; RENE MARTELL; MARVIN
K. YOUPEE, SR., individually and
as representative and next friend
of MARVIN YOUPEE, JR., WILLIAM
YOUPEE III, IRIS YOUPEE, and
BRITTANY YOUPEE; EUGENE ABBOTT;
MARGARET ABBOTT; CHARLES FOUR BEAR,
individually and as representative
and next friend of JORAY FOUR BEAR,
JONATHON LITTLE, WHIRLWIND, AVA LEE
LITTLE WHIRLWIND and CHARLES FOUR
BEAR II; ANNA FOUR BEAR; GEORGE F.
RICKER, SR.; HELEN RICKER;
GEORGE F. RICKER, JR., individually
and as representative and next friend
of ERIN RICKER; WILLIAM T. RICKER;
ABIGAIL REDDOOR; IRMA REDDOOR; LAURA
BLEAZARD, individually and as
representative and next friend of DAVID
BLEAZARD; ROSS BLEAZARD; ERICA BLEAZARD;
TRIVIAN GRAINGER, individually and
as representative and next friend of
DANIEL GRAINGER and ADAM GRAINGER; DAVID
GRAINGER; DAWN GRAINGER; DENISE GRAINGER,
individually and as representative and
next friend of JORDAN GRAINGER, JAY GRANDCHAMP
and TINA KOHL; DONNA BUCKLES-WHITMER; WARREN
WHITMER; and ALLEN YOUPEE,

Plaintiffs,

v.

MURPHY EXPLORATION & PRODUCTION
CO., a Delaware corporation;



1 MESA PETROLEUM CO., a Delaware
2 corporation; PIONEER NATURAL
3 RESOURCES USA, INC., a Delaware
4 corporation; SAMSON HYDROCARBONS
5 COMPANY, an Oklahoma corporation;
6 MARATHON OIL, an Ohio corporation;
7 and JOHN DOES 10 through 50,

8 Defendants.

9 **NOTICE OF DEPOSITION AND NOTICE TO DESIGNATE**

10 TO: Mesa Petroleum Company and Pioneer Natural Resources, USA, Inc., and its
11 attorney of record John Walker Ross.

12 The Plaintiffs, pursuant to Rule 30(b)(6), M.R.Civ.P., will take the deposition of Mesa
13 Petroleum Company, and Pioneer Natural Resources, USA, Inc., a Corporation of 5205 North
14 O'Connor Boulevard, Suite 1400, Irving, Texas 75039, #972-444-9001. Upon oral examination
15 on June 20, 2001 at the hour of 9:00 a.m., before Joann C. Bacheller, Court Reporting Services at
16 the Brown Law Firm, P.C., 315 North 24th Street, P.O. Box 849, Billings, MT 59103-0849. The
17 examination will continue from day to day until completed.

18 Mesa Petroleum Company ("Mesa") and Pioneer Natural Resources, USA, Inc.
19 ("Pioneer"), shall designate one or more officers, agents, or other persons who can testify on its
20 behalf with respect to the following matters:

- 21 1. Corporate finances such as yearly net income and yearly dividends paid for the last
22 three years for purposes of figuring appropriate punitive damages.
- 23 2. Acquisition of oil and gas leases which make up the Unit.
- 24 3. Formation and operation of the Unit.
- 25 4. Operation of the wells and related facilities on or near the Plaintiffs' property and
26 on adjacent property within the Unit.
- 27 5. Knowledge of oil and/or saltwater spills or leaks to the surface as well as
28 underground leaks to freshwater.
6. Knowledge of mechanical problems with any of its wells or related equipment or
facilities.

7. Environmental policies including procedures for reporting and cleaning up leaks and/or spills.
8. Policy regarding plugging of wells and remediation of pits.
9. Knowledge of the location, type, size, and status of all pipelines historically or presently in use of the unit. This includes any pipelines that run to or from the unit to another location.
10. Knowledge of all pipeline easements.
11. Knowledge of all field operations on lands near the Plaintiffs' property.
12. Insurance coverage regarding the Plaintiffs' claims.
13. Knowledge of the factual basis of its affirmative defenses.
14. Knowledge of the history and ownership of the property and operations that are the subject of the lawsuit. This would include any conveyance or assignment of rights in the property or operations and any enlargement of rights to the property and operations.
15. Knowledge of the operations of all pipelines such as size and types of lines, depth of lines and products transported by such pipelines.
16. Knowledge of the physical changes in the operations and property over time. This would include drilling of wells, plugging of wells, building of pits, closing of pits, injection and disposal activities, installation of pipelines, removal of pipelines, repairs of pipelines, well status, surface storage facility operations, line lease agreements, cooperative agreements and saltwater disposal agreements.
17. Knowledge of all engineering and/or geologic studies having to do with operations including drilling, production, completion, plugging, abandonment, disposal, injection, secondary recovery, tertiary recovery, original oil in place, fill up, gas caps, drive mechanisms, formations, fresh water aquifers, formation pressures, formation fluids, corrosion, fluid levels, divestiture and any and all other aspects of the oil and gas operations which have been carried out by Mesa and Pioneer.

- 1 18. Knowledge of how the oil and gas operations are monitored to insure good
2 maintenance practices are adhered to and that these operations do not impact the
3 environment.
- 4 19. Knowledge of how the Defendant makes sure it is complying with state and federal
5 laws governing its oil and gas operations.
- 6 20. Knowledge of the state and federal laws which govern its oil and gas operations.
- 7 21. Knowledge of compliance or non-compliance with all regulatory requirements.
- 8 22. Knowledge of the financial worth of the company.
- 9 23. Knowledge of any communications with Plaintiffs.
- 10 24. Knowledge of any communications with governmental agencies concerning claims
11 of pollution in the area of the Plaintiffs' property.
- 12 25. Knowledge of any communications with the United States Geologic Survey.
- 13 26. Knowledge of all ground water testing during the ordinary course of business in
14 the area of the Plaintiffs' property.
- 15 27. Knowledge of all testing, including but not limited to monitor wells, geophysical
16 surveys, boreholes, water wells and surface waters which would insure the
17 Defendants' oil and gas operations were not causing pollution.
- 18 28. The responses that the Defendants have made to charges of pollution by the USGS
19 and the EPA. This should include all testing and investigations.


20 The Plaintiff requests Mesa Petroleum Company and Pioneer Natural Resources, USA,
21 Inc., pursuant to Rule 34, M.R.Civ.P., to produce at the above time and place, and permit the
22 Plaintiff to inspect and copy, photograph, etc. the following:

- 23 1. All documents responsive to Plaintiffs' prior discovery requests that have been
24 located, discovered, and/or generated but have not been produced.

25 DATED this 29 day of May, 2001.

26 Richard J. Dolan
27 Brian K. Gallik
28 GOETZ, GALLIK, BALDWIN & DOLAN, P.C.
35 North Grand

P.O. Box 6580
Bozeman, MT 59771-6580
(406) 587-0618

By: 
Brian K. Gallik
ATTORNEYS FOR PLAINTIFFS

CERTIFICATE OF SERVICE

I hereby certify that a true and accurate copy of the above and foregoing was duly served upon the following by depositing same, postage prepaid, in the United States mail this 27 day of May, 2001.

Carolyn S. Ostby
Michael E. Webster
Crowley, Haughey, Hanson,
Toole & Dietrich P.L.L.P.
500 Transwestern Plaza II
490 North 31st Street
P.O. Box 2529
Billings, MT 59103-2529

Attorneys for Murphy
Exploration & Production
Co.

John Walker Ross
Brown Law Firm, P.C.
315 North 24th Street
P.O. Box 849
Billings, MT 59103-0849

Attorneys for Mesa
Petroleum Co. and Pioneer
Natural Resources, USA,
Inc.

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Hydrocarbons Company

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Attorneys for Marathon
Oil Company

Kirby J. Iler
Regional Counsel
Marathon Oil Company
1501 Stampede Avenue
Cody, WY 82414-4721

Attorneys for " "


Brian K. Gallik

k:\poplar.rjd\nouice of deposition for Mesa Petroleum Co. and Pioneer Natural Resources, USA, Inc.

BROWN LAW FIRM, P.C.

ESTABLISHED 1911

315 North 24th Street

P.O. Drawer 849

Billings, Montana 59103-0849

Phone 406.248.2611

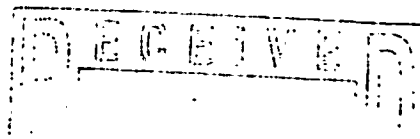
Fax 406.248.3128

Bozeman office--estate
planning and taxation
510 South 23rd Avenue
Bozeman, Montana 59715
Phone 406.587.8486
Fax 406.587.4524

C.J. Gerbase Jr.
Angus B. Fulton
Steven J. Harman
John J. Russell
Timothy A. Filz
Michael P. Heringer
Guy W. Rogers
Scott G. Gratton
Margy Bonner
Don M. Hayes
Lisa A. Speare
James E. Roberts
William A. D'Alton
Travis W. Kinzler
Timothy F. McHugh

Of Counsel
Rockwood Brown
John Walker Ross

John A. Dostal
1949-1998



April 17, 2001

Richard J. Dolan
Brian Gallik
Goetz, Gallik, Baldwin & Dolan
P.O. Box 428
Bozeman, MT 59771-0428

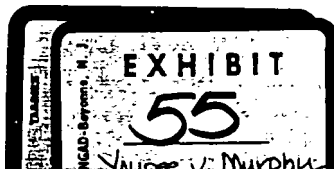
RE: Youpee, et al. v. Pioneer, et al.

Dear Dick and Brian:

This is a further response to the 28 items listed in your 30(b)(6) Notice.

At the outset, as we have noted, no Pioneer employee has first hand knowledge regarding MESA's activities associated with the Biere well, or activities in the East Poplar Oilfield during the 1970's and 1980's. Wilbur has reviewed what records Pioneer has available and is generally the Pioneer person most knowledgeable about the Biere well and items listed in your Draft 34(b)(6) Notice. However, as set forth below, Pioneer and Dover do not have much knowledge or information on some of the 28 items listed in your Notice.

1. Pioneer can produce, and Dover can explain, generally Pioneer's financials, including such things as an annual report or a form 10K.
- 2 & 3. Pioneer has not located much in the way of documents regarding the oil and gas leases and formation of the East Poplar Unit.
4. Pioneer and Dover do have some records and can re-create information regarding operation of the Biere well and its associated facilities.
5. Pioneer has some documents regarding some apparent problems with the Biere well, when it was operated by Amarco.
6. As noted, Pioneer has some documents and information regarding problems with the Biere well when operated by Amarco, and also has information regarding re-plugging of the Biere well in 1985.
- 7 & 8. Pioneer has little information regarding environmental policies in place during MESA's



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Page 2
April 17, 2001

operation, but does have information regarding Pioneer's current environmental and plugging policies.

9 10 & 11. Pioneer and Dover have little information and knowledge regarding pipelines, easements, and other operations in the East Poplar Oilfield.

12. Dover will try to have some information regarding insurance.

13. Questions regarding affirmative defenses, may be objectionable to the extent that they call for legal conclusions or work product, however, Dover may be able to provide some factual information and documentation.

14 & 15. Pioneer, and Dover have little information and knowledge regarding history and ownership of the property, but can provide such information to the extent possible.

16 & 17. As noted, Dover can provide some information regarding the operation of the Biere well based upon a review and recreation of operational files.

18, 19, 20 and 21. Dover can testify about Pioneer's current policies and compliance and knowledge of state and federal laws, and can testify about the operation of the Biere well based upon his information and review of documents.

22. Dover can testify regarding Pioneer's financials as set forth in its annual report and 10K.

23. Dover has had little or no communications with plaintiffs directly.

24. Dover can testify regarding communications with governmental agencies, particularly EPA.

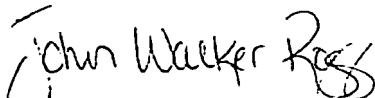
25. Dover has had little direct communication with USGS, although he has reviewed USGS reports and other matters.

26 & 27. Dover is familiar with groundwater testing in the subject area.

28. Dover is familiar with responses of Pioneer to EPA.

I hope this will be helpful and facilitate Pioneer and Dover's deposition. If you have further questions or wish to discuss this matter, please let me know. As noted in my email, I hope we can fix a date for Dover's deposition in the near future, so everyone can plan accordingly. Thank you.

Sincerely,



John Walker Ross

JWR:aka

cc: Wilbur Dover

April, 2000

Pioneer Natural Resources' Field Investigation Plan

EAST POPLAR OILFIELD

Biere Production Well & Salt Water Disposal Well & Surrounding Area

I. Background and Introduction

A. History of the East Poplar Oilfield

Oil production in the East Poplar Oilfield began in 1952. Along with crude oil, brine (water having a dissolved solid concentration greater than 35,000 mg/L) has been produced. In 1996, four brine-injection wells were active, although at least sixteen others were active at times during the Oilfield's history. Murphy Oil, USA, Inc. currently operates most of the wells in and near the East Poplar Oilfield, although at least seventeen other oil companies, including Mesa Petroleum, have been involved in past production activities. (See U.S.G.S. 1997 Report).

B. The Biere Production Well and Salt Water Disposal Well in Section 22

In 1970, Mesa Petroleum Co. ("Mesa") drilled the Biere Production Well, and associated Salt Water Disposal Well, in Section 22, Township 28 North, Range 51 East, in the East Poplar Oilfield in Roosevelt County, Montana. The Biere Production Well and Salt Water Disposal Well were operated by Mesa from 1970 to 1972, and from 1976 to 1984. The Biere Production Well and Salt Water Disposal Well were plugged in 1984, and a relief well was drilled near the Biere Production Well in 1985. In 1997, Mesa was merged into Pioneer Natural Resources, USA, Inc. ("Pioneer").

C. Allegations of Salt Water Contamination against Pioneer and Others

In 1998 and 1999, Pioneer learned of allegations of salt water contamination in the East Poplar Oilfield shallow groundwater aquifer. According to U.S.G.S., the quality of water is highly variable in the area. In 1998, some families in the East Poplar Oilfield filed a complaint against Pioneer and others, alleging that their shallow water wells had been contaminated by salt water from oilfield operations. In 1999, E. P. A. issued an Order requiring Pioneer and others to conduct investigations regarding their operations and alleged contamination in the East Poplar Oilfield.



D. Pioneer's Investigation

In response to the lawsuit and E. P. A. Order, Pioneer initially reviewed available records concerning the Biere Well and the East Poplar Oilfield. In July 1999 Pioneer did an onsite inspection at the Biere Well site, but no visible contamination was observed at the site surface. In November 1999 Pioneer consultants did further onsite inspection and took soil samples at the Biere Well site. That site inspection and soil samples again indicated minimal contamination at the surface of the Biere Well site. In February 2000 Pioneer consultants drilled preliminary, shallow, exploratory test holes near the Biere Well and Salt Water Disposal Well. This February 2000 drilling of preliminary test holes at the Biere Well site revealed evidence of some old metal oilfield debris, and elevated water temperatures, at a depth of approximately 41 feet below the surface. However, because of the preliminary and temporary nature of these February 2000 test holes, no precise findings and conclusions were made.

Pioneer and its consultants now intend this field investigation. Objectives of this investigation include:

- (1) Determining local shallow ground water aquifer hydraulic properties, ground water flow directions and flow rates, and obtaining defendable, repeatable water chemistry analysis;
- (2) Determining to what extent, if any, that salt water from the Biere Wells, or other sources, may have impacted ground water to the southwest of the Biere Wells.

II. Pioneer's Proposed Field Investigation

A. Proposed Monitoring Wells

Pioneers' field investigation includes the installation, testing and sampling of approximately nine (9) shallow (less than 60 feet deep) monitoring wells to help resolve the investigation's objectives. The proposed wells will be located up-gradient and down-gradient of the Biere Wells, and background locations. Domestic wells at the Lockman and Trotter residences, and existing U.S.G.S. monitoring wells and other data, will also be used to augment the new wells. The nine new wells currently proposed by Pioneer Natural Resources ("PNR") are shown on Figure 1, and discussed in the following paragraphs:

*PNR Monitoring Wells No. 4 and No. 5 at the Biere Production Well
and Biere Salt Water Disposal Well*

PNR Monitoring Wells No. 4 and No. 5 are to be located near the old Biere Production Well and Salt Water Disposal Well in Section 22. These shallow wells will be constructed of 2-inch diameter stainless steel casing and screen. Thirty feet of 6-inch schedule 40 PVC surface casing will be cemented into a 10-inch diameter hole prior to penetrating into the thermally charged shallow ground water as a precaution against uncontrollable artesian leakage if hydraulic heads greater than land surface are encountered, or develop later. After the cement sets, 6-inch nominal borehole will be advanced to the top of the Bearpaw Shale, where 15 feet of well screen will be set. The 2-inch casing will be sealed with bentonite and cement grout from the top of the sand pack (approximately 2 feet above the well screen) to the surface. These wells will be constructed using mud rotary drilling techniques because of the size of the hole required to set the surface casing and the need to continue drilling below the surface casing to complete the wells at the desired depths. These wells will be used to qualitatively evaluate and produce defensible monitoring points to assess the contribution of saline and thermal water into the shallow groundwater system. Permanent monitoring points at these locations will be used to monitor the results and effectiveness of future remedial actions.

*PNR 6 East (background well), PNR 7 (down gradient west) and
PNR 8 (down gradient southwest)*

These wells are strategically located in order to provide information on ground water flow rates, directions and water chemistry distribution in the vicinity of the Biere Wells. PNR 6 will be located east of the Biere Wells in Section 22. The location of PNR 6 was chosen to evaluate the background conditions and the potential impact of wells to the east of the Biere Wells. Well PNR 7 is located west of the Biere Wells, in Section 21 near the Juniper Well. Well PNR 8 is to be located southwest of the Biere Wells, along a section road in Section 21, where access can be obtained. These wells will be single completions constructed of 2-inch schedule 40 PVC casing and screen installed by hollow stem auger drilling methods.

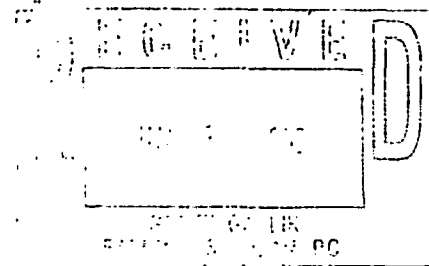
PNR Wells 9, 10, 11 and 12

PNR Wells 9, 10, 11 and 12 are optional wells that may be installed. Three of these optional wells will be installed to the west-southwest, between the Biere Wells and selected plaintiffs. PNR 9 would be located along a highway right-of-way, or fence row, in Section 21. PNR 10 and PNR 11 would be located in Section

28. The specific locations of some of these wells will be determined after further analysis of initial flow directions, consultations and access arrangements.

B. Analysis of Well Data

All wells will be surveyed for horizontal and vertical control. Multiple sets of water levels will be collected over the course of the investigation to establish groundwater flow directions. Aquifer properties (primarily hydraulic conductivity) will be estimated based on examination of aquifer materials and by single well pumping tests or slug tests depending on aquifer properties and well yields. Water chemistry will be evaluated by use of field temperature and specific conductivity measurements coupled with one round of water samples from each well submitted for laboratory analysis of common ions.



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7 *Attorneys for Defendants MESA*
8 *Petroleum Co., Pioneer Natural*
9 *Resources Company and Pioneer*
10 *Natural Resources USA, Inc.*

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
BILLINGS DIVISION

CARY G. YOUPEE, et al.,
Plaintiffs,

v.

MURPHY OIL USA, INC., et al.
Defendants.

MESA PETROLEUM and
PIONEER NATURAL RESOURCES,
USA, INC.,

Defendants/Third
Party Plaintiffs, and
Cross-Plaintiffs,

v.

AMARCO RESOURCES CORP. BESTWAY
INC.; WESTDALE PETROLEUM INC.; and
THE PRUDENTIAL GROUP,

Third Party Defendants,

v.

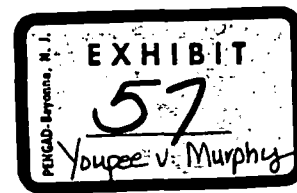
JOHN DOES 4-50,

Cross-Defendants.

Cause No. CV 98-108-BLG-JDS

Judge Jack D. Shanstrom

ANSWER OF DEFENDANTS MESA
PETROLEUM CO. and PIONEER
NATURAL RESOURCES, USA, INC. TO
PLAINTIFFS' EIGHTH AMENDED
COMPLAINT



1 COME NOW the Defendants and Third Party Plaintiffs, MESA Petroleum and Pioneer
2 Natural Resources, USA (hereinafter collectively "Pioneer"), and answer Plaintiffs' Eighth Amended
3 Complaint as follows:

4 1. In answering Paragraphs 1-19, Pioneer Defendants are without sufficient information
5 at this time regarding the allegations therein, and therefore deny them.

6 2. In answering Paragraphs 20 and 21, Pioneer Defendants state that Mesa Petroleum
7 Company no longer exists and is not a proper party. Mesa's successor is Pioneer Natural Resources,
8 USA, Inc., a Delaware corporation, registered to do business in Montana, with principal place of
9 business in Texas. Pioneer admits that Mesa has, in the past, been engaged in exploration for oil, the
10 drilling of an oil well, and the production of oil therefrom in Roosevelt County, Montana. Pioneer denies
11 that Pioneer Natural Resources has engaged in oil exploration and production in Roosevelt County,
12 Montana.

13 3. In answering Paragraphs 22-26, Pioneer Defendants admit that AmarcoResources
14 had interests in the East Poplar Oil Field, and interest and operation in the Biere 1-22 well; admit that
15 Westdale is a successor to at least some of Amarco's interest in the Biere 1-22 well; admit that
16 Bestway Inc. (Bestway) is a successor to at least some of Amarco Resources; admit that Prudential
17 had a working interest in the East Poplar Oil Field and the Biere 1-22 well; admit that Hillin is a
18 successor to Prudential Groups' interest in the Biere 1-22 well.

19 4. In answering Paragraphs 27-28, Pioneer Defendants are with without sufficient
20 information at this time and therefore, deny the allegations.

21 5. In answering Paragraph 29, Pioneer Defendants admit that other John Does were
22 involved in oil exploration and production in the East Poplar Oil Field, and Plaintiffs' damages, if any,
23 must be apportioned among all persons and entities.

24 6. In answering Paragraphs 30 and 32, Pioneer Defendants admit that Defendants
25 had ownership or operational interests in the East Poplar Oil Field; Pioneer is without sufficient
26 information at this time regarding the specific details of other Defendants' interest and operations in
27 the East Poplar Oil Field, and therefore deny allegations in regard thereto.

1 7. In answering Paragraph 31, Pioneer Defendants admit that this court has
2 general jurisdiction in this matter, however this court may not have jurisdiction of at least some of
3 Plaintiffs' claims and remedy requests pursuant to CERCLA, 43 USC Section 9613(h).

4 8. In answering Paragraphs 33-36, Pioneer Defendants are without sufficient
5 information regarding the allegations therein at this time, and therefore deny them; state that there is
6 no evidence that benzene from Pioneer's operation in the East Poplar Oil Field have or will cause any
7 adverse health effects to Plaintiffs.

8 9. In answering Paragraphs 37-39, Pioneer admits that USGS and EPA have
9 conducted studies and investigations regarding the East Poplar Oil Field; admit that any reports or
10 findings and results of those studies and investigations speak for themselves, but are subject to further
11 challenge. Pioneer is without sufficient information regarding the remaining allegations in Paragraphs
12 37, 38 and 39 at this time and therefore deny them.

13 10. In answering Paragraph 40, admit that benzene, in certain quantities, under certain
14 conditions, may have adverse health effects; state that there is no evidence that benzene from
15 Pioneer's operation in the East Poplar Oil Field have or will cause any adverse health effects to
16 Plaintiffs.

17 11. In answering Paragraph 41, admit that samples with dissolved solids were taken in
18 the East Poplar Oil Field and that results of such samples speak for themselves, but are subject to
19 further scrutiny; admit that water with elevated levels of total dissolved solids, in certain quantities,
20 under certain conditions, may have adverse health effects; state that there is no evidence that water
21 with total dissolved solids from Pioneer's oil field operations have or will cause adverse health effects
22 to Plaintiffs.

23 12. In answering Paragraphs 42 and 43, admit that EPA made preliminary findings and
24 issued orders to Defendants to provide temporary water supplies and submit certain information
25 regarding their operations and groundwater conditions in the East Poplar Oil Field to EPA, but state
26 that such findings are subject to further challenge and *de novo* review.

27 13. In answering Paragraphs 44-46, admit that on or about November 17, 2000,
28

1 Plaintiffs sent Defendants, and others, by certified mail, a "Notice of Intent to File Citizen Suit under
2 the Safe Drinking Water Act ; state that said "Notice" speaks for itself; state that more than 60 days
3 have passed since said "Notice" was served upon Pioneer Defendants; state that Plaintiffs' Notice and
4 Citizen Suit are subject to further scrutiny and challenge; state that whether Plaintiffs' Eighth Amended
5 Complaint and Citizen Suit Complaint are preempted by governmental proceedings calls for a legal
6 conclusion.

7 14. In answering Paragraphs 47 and 48, Pioneer Defendants deny the allegations.

8 COUNT ONE (NEGLIGENCE)

9 15. In answering Paragraph 49, the Pioneer Defendants restate their responses to the
10 allegations in Paragraphs 1-48.

11 16. The Pioneer Defendants deny the allegations of Paragraph 50.

12 COUNT TWO (NEGLIGENCE - RES IPSA LOQUITUR)

13 17. In answering Paragraph 51, the Pioneer Defendants restate their responses to the
14 allegations in Paragraphs 1-50.

15 18. The Pioneer Defendants deny the allegations of Paragraph 52.

16 COUNT THREE (NUISANCE)

17 19. In answering Paragraph 53, the Pioneer Defendants restate their responses to the
18 allegations in Paragraph 1-52.

19 20. In answering Paragraphs 54-59, the Pioneer Defendants deny the allegations
20 therein.

21 COUNT FOUR (STRICT LIABILITY)

22 21. In answering Paragraph 60, the Pioneer Defendants restate their responses to the
23 allegations in Paragraphs 1-59.

24 21. In answering Paragraph 61, the Pioneer Defendants deny the allegations therein.

25 COUNT FIVE (TRESPASS)

26 22. In answering Paragraph 62, the Pioneer Defendants restate their responses to the
27 allegations in Paragraphs 1-61.

28

1 23. In answering Paragraphs 63-66, the Pioneer Defendants deny the allegations
2 therein.

3 COUNT SIX (UNJUST ENRICHMENT)

4 24. In answering Paragraph 67, the Pioneer Defendants restate their responses to the
5 allegations in Paragraphs 1-66.

6 25. In answering Paragraphs 68-70, the Pioneer Defendants deny the allegations
7 therein.

8 COUNT SEVEN (PUNITIVE DAMAGES)

9 26. In answering Paragraph 71, the Pioneer Defendants restate their responses to the
10 allegations in Paragraphs 1-70.

11 27. In answering Paragraph 72, the Pioneer Defendants deny the allegations therein.

12 COUNT EIGHT (VIOLATION OF MONTANA CONSTITUTION)

13 28. In answering Paragraph 73, Pioneer Defendants restate their responses to
14 allegations in Paragraphs 1-72.

15 29. In answering Paragraph 74, Defendants state that the Montanan Constitution
16 speaks for itself; Defendants deny the remaining allegations in Paragraph 74.

17 30. In answering Paragraphs 75 and 76, Pioneer Defendants deny the allegations
18 therein.

19 COUNT NINE (ATTORNEYS' FEES)

20 31. In answering Paragraph 77, the Pioneer Defendants restate their responses
21 to the allegations in Paragraphs 1-76.

22 32. In answering Paragraphs 78 and 79, the Pioneer Defendants deny the
23 allegations therein.

24 COUNT TEN (MEDICAL MONITORING)

25 33. In answering Paragraph 80, the Pioneer Defendants restate their responses
26 to the allegations in Paragraphs 1-79.

27 34. In answering Paragraphs 81-84, the Pioneer Defendants deny the allegations
28 therein.

1 COUNT ELEVEN (CITIZENS' SUIT UNDER SAFE DRINKING WATER ACT)

2 35. In answering Paragraph 85, the Pioneer Defendants restate their responses
3 to the allegations in Paragraphs 1-84.

4 37. In answering Paragraph 86, the Pioneer Defendants deny that Plaintiffs are
5 entitled to relief under the Safe Drinking Water Act, and deny that there have been illegal discharges
6 of contaminants which have affected Plaintiffs.

7 38. In answering Paragraph 87, the Pioneer Defendants deny that their actions
8 have violated, and continue to violate, the Safe Drinking Water Act and regulations thereunder; state
9 that the allegations in Paragraph 87 constitute a legal conclusion; and state that the Safe Drinking
10 Water Act and regulations thereunder, speak for themselves.

11 39. In answering Paragraph 88, the Pioneer Defendants state that the allegations
12 therein constitute a legal conclusion; state that they are without sufficient information regarding the
13 remaining allegations in Paragraph 88, and therefore deny them.

14 40. In answering the allegations in Paragraph 89, the Pioneer Defendants deny
15 the allegations therein.

16 AFFIRMATIVE DEFENSES

17 FIRST AFFIRMATIVE DEFENSE - FAILURE TO STATE A CLAIM

18 Plaintiffs' Complaint fails to state a claim against the Pioneer Defendants upon which relief
19 can be granted.

20 SECOND AFFIRMATIVE DEFENSE - STATUTE OF LIMITATIONS

21 Plaintiffs' claims are barred by applicable statutes of limitations.

22 THIRD AFFIRMATIVE DEFENSE - WAIVER, ESTOPPEL AND LACHES

23 Plaintiffs' claims are barred by laches, estoppel, waiver, contributory negligence and failure
24 to mitigate.

25 FOURTH AFFIRMATIVE DEFENSE - ASSUMPTION OF RISK

26 Plaintiffs' claims and damages are barred in whole or in part by assumption of risk,
27 because Plaintiffs voluntarily assumed the risk of conditions, events, occurrences and damages.
28

1 FIFTH AFFIRMATIVE DEFENSE - CERCLA 9113(h)

2 All courts lack jurisdiction at this time over certain claims and requests of Plaintiffs under
3 42 USC § 9113(h).

4 SIXTH AFFIRMATIVE DEFENSE - PRIMARY AGENCY JURISDICTION

5 The issues, claims, damages and remedies raised by the Plaintiffs are uniquely and
6 primarily within the expertise, discretion and primary jurisdiction of federal, state and tribal agencies,
7 and are being addressed by those agencies.

8 SEVENTH AFFIRMATIVE DEFENSE - ADEQUATE REMEDIES

9 With respect to Plaintiffs' request for injunctive or equitable relief, Plaintiffs have adequate
10 remedies at law and from federal, state and tribal agencies.

11 EIGHTH AFFIRMATIVE DEFENSE - NEGLIGENCE OF OTHER PARTIES AND
12 APPORTIONMENT OF LIABILITY

13 Plaintiffs' damages and injuries, if any, were caused in whole or in part by their own
14 negligence, or negligence or other wrongful conduct of other parties, joined or unjoined, and liability
15 must be apportioned amongst all such persons in accordance with facts and applicable law, including
16 apportionment of all potentially negligent tort fees, as under Section 27-1-703, M.C.A.

17 NINTH AFFIRMATIVE DEFENSE - FAILURE TO JOIN ALL NECESSARY PARTIES

18 Plaintiffs have failed to join all necessary parties.

19 TENTH AFFIRMATIVE DEFENSE - NEGLIGENCE

20 The Pioneer Defendants were not negligent in their activities and the Pioneer Defendants'
21 activities were done pursuant to state and federal law, and the activities of the Pioneer Defendants
22 did not cause Plaintiffs' alleged damages.

23 ELEVENTH AFFIRMATIVE DEFENSE - NO CAUSATION

24 The damages and injuries of Plaintiffs are the results of actions, inactions and admissions
25 of Plaintiffs and/or other defendants, or other third parties, and not the result of actions, inactions or
26 admissions of the Pioneer Defendants' actions or inactions.
27
28

1 TWELFTH AFFIRMATIVE DEFENSE - SUPERSEDING INTERVENING ACTS

2 Any and all damages purportedly sustained were the proximate result of independent and
3 intervening acts, conduct, fault, negligence, breach of duty or misconduct by persons or entities other
4 than Pioneer.

5 THIRTEENTH AFFIRMATIVE DEFENSE - CONTRIBUTORY NEGLIGENCE

6 Plaintiffs damages, if any, were caused in whole or in part by Plaintiffs' own acts,
7 omissions or negligence.

8 FOURTEENTH AFFIRMATIVE DEFENSE - RES IPSA LOQUITUR

9 Plaintiffs' Counts Two and Four should be dismissed as a matter of law because
10 Defendants' operations are not harmful per se, and the doctrines of strict liability and res ipsa loquitur
11 are not applicable to the claims asserted by Plaintiffs.

12 FIFTEENTH AFFIRMATIVE DEFENSE - TRESPASS

13 Plaintiffs' Count Five (Trespass) should be dismissed as a matter of law because the
14 Pioneer Defendants did not wrongfully invade the property rights of Plaintiffs, thereby causing actual
15 damages to Plaintiffs.

16 SIXTEENTH AFFIRMATIVE DEFENSE - UNJUST ENRICHMENT

17 Plaintiffs' Count Six (Unjust Enrichment) should be dismissed as a matter of law because
18 Pioneer Defendants have not benefitted at the expense of Plaintiffs.

19 SEVENTEENTH AFFIRMATIVE DEFENSE - PUNITIVE DAMAGES

20 Plaintiffs' Count Seven (Punitive Damages) should be dismissed as a matter of law.

21 EIGHTEENTH AFFIRMATIVE DEFENSE - CONSTITUTIONAL VIOLATION

22 Plaintiffs' Count Eight (Constitutional Violation) should be dismissed as a matter of law
23 because it is not applicable to private non-governmental entities.

24 NINETEENTH AFFIRMATIVE DEFENSE - NO BASIS FOR ATTORNEY FEES

25 Plaintiffs are not entitled to recover attorneys fees in this case under applicable law.
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1 TWENTIETH AFFIRMATIVE DEFENSE - MEDICAL MONITORING

2 Plaintiffs' Count Ten (Medical Monitoring) should be dismissed as a matter of law because
3 such claim is not recognized in Montana, and if it is, Plaintiffs have not and cannot establish that is
4 applicable in this case.

5 TWENTY- FIRST AFFIRMATIVE DEFENSE - CITIZEN SUIT
6 UNDER SAFE DRINKING WATER STATUTE

7 Plaintiffs' Count Eleven (Citizen Suit Under Safe Drinking Water Statute) should be
8 dismissed because it is defective and Plaintiffs have not, and cannot, establish that they can bring a
9 Citizens Suit Claim.

10 TWENTY SECOND AFFIRMATIVE DEFENSE - MITIGATION

11 Plaintiffs damages in any, are subject to mitigation, and are barred to the extent Plaintiffs
12 have failed to mitigate.

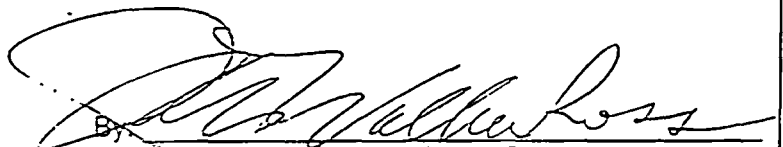
13 TWENTY THIRD AFFIRMATIVE DEFENSE - SPECULATIVE DAMAGES

14 Plaintiffs' damages are speculative.

15 WHEREFORE, the Pioneer Defendants pray that as to them, Plaintiffs take nothing by their
16 Complaint, and that Plaintiffs' Eighth Amended Complaint be dismissed with prejudice, and that the
17 Pioneer Defendants be awarded their costs, and such other and further relief as the court may deem
18 proper.

19 DATED this 4 day of June, 2001.

20 BROWN LAW FIRM, P.C.

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25 John Walker Ross
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COMMUNITY RELATIONS PLAN
FORMER MESA PRODUCTION/DISPOSAL WELL SITE
EAST POPLAR OIL FIELD
FORT PECK INDIAN RESERVATION

Update of March 2000

I. Introduction

This document sets forth the Community Relations Plan governing Pioneer Natural Resources USA, Inc.'s investigation at or near a former Mesa Petroleum production well, and an adjacent disposal well, located within the East Poplar Oil Field on the Fort Peck Indian Reservation. Pioneer is conducting a remedial investigation of this area to characterize environmental conditions at the Site and determine whether any response actions are warranted. The Community Relations Plan is designed to satisfy the community relations requirements of the National Contingency Plan, 40 CFR § 300.430, as they relate to remedial investigations.

II. The Goals of Pioneer's Community Relations Program

Pioneer designed this Community Relations Plan to promote two-way communication between Pioneer and local residents and citizens groups. Pioneer's decision-making ability is enhanced by actively soliciting comments and information from the public. This Community Relations Plan is responsive to the following goals:

- Establish and maintain effective communication between Pioneer and the community surrounding the Site.

Pioneer has established and will continue to maintain effective communication through its community relations activities. Pioneer will draw on a variety of community involvement tools, including meetings, fact sheets, and public announcements, to facilitate communication about the Site.

- Provide information about Site-related activities and issues to concerned citizens and government officials to increase their awareness and understanding of the Site.

Pioneer has and will continue to provide information to concerned citizens and Federal and local officials. Some of the ways Pioneer will accomplish this objective include fact sheets, activities updates, information sessions, meetings with members of the public, and the dissemination of technical reports through an information repository.



Pioneer will provide information about Site-related activities in a timely, accurate, and consistent manner.

- Incorporate community views into decision-making concerning the Site.

Wherever possible, Pioneer's investigation of the Site will reflect the views of the local citizenry or their representatives.

III. Pioneer's Community Relations Activities to Date

Pioneer representatives (collectively referred to as "Pioneer") already have undertaken to communicate with local residents and organizations. Pioneer met with the Fort Peck Tribal Environmental Manager, Deb Madison, and the Tribal Geologist, Larry Monson. In addition, Pioneer visited with residents in the area of the Site, including Mr. and Mrs. Lockman and Mrs. Trottier. Pioneer also is coordinating with the U.S. Environmental Protection Agency ("EPA") pursuant to a Safe Drinking Water Act administrative order issued to Pioneer and several other companies. A number of additional community relations activities will be undertaken, as described below.

IV. Ongoing Community Relations Activities

To achieve its community relations objectives effectively and efficiently, Pioneer currently intends to pursue the following community relations activities for the Site. Pioneer will conduct these activities throughout the remedial investigation process to ensure that the community is informed of Site activities and developments and to ensure that the public has sufficient time to express its concerns.

Activity 1: Designate a Pioneer Community Involvement Coordinator for the Site.

Objective: To ensure prompt, accurate, and consistent information and responses about the Site.

Method: Charles Peterson of MSE-HKM Engineering has been designated as the Community Involvement Coordinator for the Site.

Mr. Peterson has established and will maintain communications with concerned citizens and Federal and local officials. Mr. Peterson also will help implement Pioneer's community relations activities and be available to the public via telephone. Mr. Peterson can be contacted at 406-656-6399.

Activity 2: Respond Promptly and Accurately to Inquiries from Residents, Public Officials, and Community Groups.

Objective: To maintain two-way communication between Pioneer and the local community.

Method: Pioneer will use meetings and printed material to respond to public concerns and inquiries, and also will use the Community Involvement Coordinator to provide personal responses. The Coordinator will respond to all inquiries promptly and will be accessible to the public by telephone.

Activity 3: Notify the Community of Site Activities on a Regular Basis

Objective: To provide the public with information about Site activities, thereby minimizing concerns about activities and possible disruptions to the community.

Method: Pioneer has and will continue to disseminate information to the public through various tools, including fact sheets, information sessions, meetings with the public, and placing relevant records in the information repository, all as discussed further below.

Activity 4: Update Community Relations Plan

Objective: To reflect changes in the level and nature of community concern and changes or progress in Pioneer's response activities.

Method: The Community Relations Plan will be revised as necessary to accomplish the above-stated objective.

Activity 5: Prepare and Distribute Fact Sheets, Public Notices, or Technical Summaries

Objective: To provide the public with up-to-date information on the status and findings of investigatory activities.

Method: Fact sheets and/or other outreach documents will be mailed to all parties on the Site mailing list (see below). Copies will be available at the information repository. Fact sheets will be distributed when significant new information about Site activities is available or when Pioneer needs to announce a public meeting or other Pioneer-sponsored activity. If appropriate, notices may be published in the local newspaper.

Activity 6: Meet with Members of the Public

Objective: To provide a forum for Pioneer to explain the investigatory process, share information on Site-related activities, and request input from the community.

Method: Pioneer has and will continue to hold meetings as warranted by Site activities or requested by the community.

Activity 7: Solicit Comment on Any Proposed Remedial Plan

Objective: To request public input on a cleanup plan if Pioneer's investigation demonstrates that cleanup activities are warranted.

Method: Pioneer will be coordinating closely with EPA as to any proposed response action. In conjunction with EPA, and in accordance with any applicable regulations, Pioneer will solicit comment on the selection of an appropriate remedy for the Site, if any.

Activity 8: Maintain and Update a Site Mailing List

Objective: To mail fact sheets and other Pioneer materials to residents and to contact residents about other community involvement activities.

Methods: Pioneer will maintain an up-to-date listing of residents, local officials, community groups, and other interested parties. The mailing list will be derived from public meeting sign-in sheets, expressions of interest from citizens or groups, and those tribal or governmental officials with a known interest in the Site.

Activity 9: Establish and Update an Information Repository

Objective: To provide the public with easy access to information on the Site.

Methods: Pioneer has established the Fort Peck Tribal Environmental Officer, Debra Madison, as the information repository for the Site. The repository will be located at 605 Indian Avenue, Poplar, MT 59255, and can be contacted through Ms. Madison's office at 406-768-5155. Pioneer will place Site-related documents in the information repository as the documents are released.

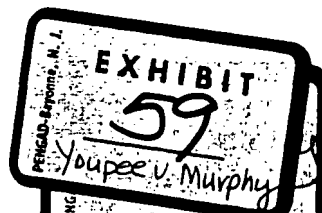
Report

Field Investigation Biere Well Evaluation, Poplar, Montana

Prepared for
Pioneer Natural Resources

August 2000

CH2MHILL



Summary

The primary findings of this investigation are the following:

1. This report is primarily designed to present the field investigation results as a source of data with minimal interpretation.
2. The study area is underlain by tight clayey glacial till. Beneath the till is a gravel aquifer of highly variable thickness and water bearing properties. The aquifer is confined above by the till and below by the Bear Paw Shale. As a consequence of these enveloping confining units the aquifer is under confined to semi-confined conditions over much of the area.
3. The shallow aquifer water chemistry in an undefined area extending from the Biere well site to the east beyond the Trottier residence has been essentially replaced by sodium chloride brine.
4. Benzene concentrations exceed MCLs in the crude oil and in several monitoring and unused domestic wells, which suggests that the native oil is the source of benzene (and other BTEX constituents). Either multiple sources and/or complex hydrogeologic flow patterns are believed responsible for the observed benzene distribution.
5. The most likely source(s) of saline water and BTEX in the study area are petroleum wells penetrating the Mississippian Age oil formations at depth.
6. All the oil exploratory, production, and salt water disposal wells drilled in the study area, and the historical handling of the produced fluids, may have contributed and many may still be contributing BTEX and saline water into the shallow aquifer at highly variable rates. Water chemistry signatures evaluated to date do not allow differentiation between the multiple possible sources.
7. Either or both the Biere Production and Relief Wells appear to be a specific source of saline water impacting the shallow aquifer in the immediate vicinity of the Biere wells, and this impact appears to extend at least 1/3 mile to the west. Other specific sources, flow paths, and direct mechanisms responsible for water quality impacts beyond the immediate vicinity of the Biere wells cannot be determined with the available data.
8. A secondary shallow groundwater system that is largely unaffected by saline water is present east of the Biere well site and appears to extend at least to the new supply well (M-30) southeast of the impacted area.
9. The data presentation and resultant preliminary interpretations presented in this report are heavily influenced by limited data distribution, especially to the southeast, south, and southwest.

525-632-3586

BIERE #1-22

OPERATOR: MESA
 SUSPECT: SYNDER SW POPULAR
 LOCATION: SEC 22-T28N-R51E
 COUNTY, STATE: ROOSEVELT CO., MT
 MESA WI: 43.33%
 AFE NO.: A4-016
 AFE COST: \$30,100

OP NO.: 04-MT-0399-01
 ID NO.: 01-04-MT-0399-0001-000-0
 TYPE WELL: ABANDONMENT
 CASING: 8 5/8" @ 741'
 CASING: 5 1/2" @ 5,845'

REMOVED

9/11/84

CED 24 1084

PO: Prep to release pkr & POH w/tbg

MI & RU WellTech PU @ 0900 hrs, 9-10-84. Set pumps & pits @ 1400 hrs. Loaded pits w/wtr & SDON.

CWC \$1,740

9/12/84

PO: Prep to mix 14 ppg mud & attempt to kill well

Mixed 100 BSW w/10.5 ppg mud. Pumped 25 bbls down tbg & killed well. Attempted to ND wellhead. Well flowed up csg @ 9 BWPH @ 50 psi. Pumped 75 bbls down csg, but was unable to kill well. Well flowed back 36 BW, no gas & light trace of oil. SION.

CWC \$3,924

3/84

PO: Prep to kill well & POH w/pkr & tbg

WO for truck (4 hrs) to haul 125 BSW to location. Mixed 10.9 ppg mud (42 vis). Pumped 30 bbls 10.9 ppg mud down csg in unsuccessful attempt to kill well. SDON.

CWC \$3,924

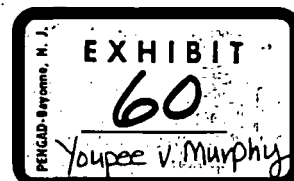
9/14/84

PO: Prep to pump cmt plugs/P&A

Opened csg to tank battery. Well flowed approx 9 BPH. Pumped 50 bbls 10.9 ppg mud down csg & 30 bbls down tbg. Still unable to kill, appears to have csg leak in the Judith River Formation. Tied csg into tank battery & flowed 140 BW in 2 hrs (increased from 9 BPH to 70 BPH). Ordered out backhoe & dug pits to flow into while attempting to install BOP & stripping head. Unable to install BOP due to strong kick from csg. SION.

CWC \$12,638

XC: RESERVOIR, ACTG., CEN. RCDS., PROD RCDS., GAS CONT., DRLG MGR, DIV MGR, D&M, MC&P
 MATERIAL CONTROL, PRODUCTION FOREMAN



9/15/84

PO: Prep to P&A

WO cmt 4 hrs. Halliburton had PU bulk trucks from evening before & had not notified Mesa. Established IR of 5 BPM w/no pressure down tbg. Mixed 50 sx Class "H" cmt (16.5 ppg) & pumped down tbg @ 5 BPM w/700 psi. Displaced w/33.3 BFW. Let set 1 hr. RU Oilwell Perforators & RIH. TOC @ 5760'. Shot 4 shots @ 5750'. Mixed 30 sx Class "H" cmt (16.5 ppg) & displaced w/31 BFW leaving 315' of cmt inside & outside tbg from 5435' to 5750'. RU perforators & shot 12 holes w/1 9/16" gun @ 993-996'. Mixed 30 sx Class "H" cmt & pumped down tbg on vacuum. SI tbg. Mixed & pumped 85 sx down 5 1/2" csg. SI csg. Mixed & pumped 25 sx down 8 5/8" csg. Mixed & pumped an additional 20 sx down tbg. Released rig @ 1830 hrs, 9-14-84.

CWC \$25,638

9/16/84

PO: Prep to P&A

Mixed 65 sx Class "H" cmt & pumped into surface csg. WOC 1 hr. Mixed & pumped 60 sx Class "H" cmt into surface csg @ 2 BPM w/max pressure 200 psi. Mixed & pumped 20 sx Class "H" cmt into surface csg after WOC 2 hrs.

CWC \$27,335

9/17/84

Prep to P&A

Surface csg still has small leak. Will attempt to pump 50 sx Class "H" cmt into surface csg.

CWC \$27,335

9/18/84

PO: FINAL REPORT - P&A

Mixed & pumped 1 bbl cmt down 5 1/2" - 8 5/8" annulus @ 1200 psi. (held @ 800 psi). SD for 2 hrs. Cut off csg & tbg 4' below GL. Welded cap on 8 5/8" csg. Poured 10 sx cmt on top of cap.

CWC \$30,941

FINAL REPORT - P&A

BIERE A-1 SWD

9/16/84

PO: Prep to P&A

Ordered 250 sx Class "H" cmt. Mixed & pumped down tbg & csg. Held 250 psi.

CWC \$3,254

ADDITION TO WELL RECORD
PAGE 3

7/84
FINAL REPORT - P&A

Cut csg 4' below GL. Welded cap on csg.

CWC \$4,104

FINAL REPORT - P&A

1 Carolyn S. Ostby
2 Michael E. Webster
3 CROWLEY, HAUGHEY, HANSON,
4 TOOLE & DIETRICH P.L.L.P.
5 500 Transwestern Plaza II
6 490 North 31st Street
7 P. O. Box 2529
8 Billings, MT 59103-2529
9 Telephone: (406) 252-3441

10 Attorneys for Defendants
11 Murphy Oil USA, Inc. and
12 Murphy Exploration & Production Co.

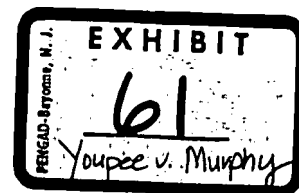
13 IN THE UNITED STATES DISTRICT COURT
14 FOR THE DISTRICT OF MONTANA
15 BILLINGS DIVISION

13	CARY G. YOUPEE, et al.,)	Cause No.: CV 98-108-BLG-JDS
14	Plaintiffs,)	
15	vs.)	MURPHY EXPLORATION &
16	MURPHY OIL USA, INC., et al.,)	PRODUCTION COMPANY'S
17	Defendants.)	RESPONSES TO PLAINTIFFS'
)	SECOND DISCOVERY REQUESTS

18 Defendant Murphy Exploration & Production Company
19 (hereinafter "Murphy E&P") responds to the plaintiffs' second
20 discovery requests as follows:

21 OBJECTIONS TO DEFINITIONS

22 (1) Murphy E&P objects to the definitions contained on
23 pages 2-5 of plaintiffs' discovery requests to the extent they



1 impose obligations beyond those contained in or allowed by the
2 Rules of Civil Procedure.

3 (2) Murphy E&P objects to definition (10) on page 5 of
4 plaintiffs' discovery requests to the extent it attempts to
5 impose discovery obligations on entities which are not parties
6 before the Court.

7 (3) Some of the documents plaintiffs request are
8 confidential, commercially sensitive documents, distribution
9 of which may cause harm to Murphy E&P. In the event
10 plaintiffs wish to obtain copies of any such documents or
11 materials produced for their review, Murphy E&P reserves the
12 right to seek any necessary protective orders to insure the
13 confidentiality of the documents, if the plaintiffs are
14 unwilling to voluntarily enter into an appropriate
15 confidentiality agreement.

16 DISCOVERY REQUESTS

17 INTERROGATORY NO. 28: If any of the documents requested
18 herein were, but no longer are within the control and custody
19 of the Defendant, please state in detail the contents of the
document, the parties to the document, and the person,
corporation, or entity who is now in possession and control of
such document.

20 ANSWER: Murphy E&P objects to this interrogatory as
21 being confusing, ambiguous, overbroad, and requiring
22 speculation on the part of Murphy E&P. Without waiving this
objection, Murphy E&P would note that for documents no longer
within its custody or control, it has no knowledge of the
requested information concerning any such document.

23 INTERROGATORY NO. 29: If any documents responsive to any
24 request for production are withheld based on a claim of

1 privilege, with respect to each such document, state the
2 following:

- 3 (a) The number of the Request for Production;
- 4 (b) Which privilege is claimed;
- 5 (c) The nature of that document, i.e., whether it is a
6 letter, memorandum, photograph, etc.;
- 7 (d) The date it was prepared;
- 8 (e) The identity of the person preparing it;
- 9 (f) The identity of each person to whom it was sent or
10 given; and
- 11 (g) A summary of its subject matter.

12 D. If only a machine copy of a document is produced,
13 please advise where the original is located.

14 ANSWER: Murphy E&P states that for each Request for
15 Production contained within Plaintiffs Second Discovery
16 Requests, Murphy E&P will provide to the plaintiffs such
17 information as is required under any applicable Rules of Civil
18 Procedure regarding any document which will be withheld from
19 plaintiffs' document review based upon any asserted privilege.

20 Continuing Request: Each of the following requests is a
21 continuing request. Plaintiffs ask that Defendants supplement
22 their responses as new or additional documents become
23 available. Plaintiffs ask that supplementation be made at
24 least every thirty (30) days.

25 RESPONSE: Murphy E&P objects to the "Continuing Request"
26 notation contained within Plaintiffs' Second Discovery
27 Requests to the extent such request would impose discovery
28 obligations beyond those contained in or allowed by the Rules
29 of Civil Procedure. As to supplementation of disclosure and
30 responses, Murphy E&P will comply with the requirements of the
31 applicable Rules of Civil Procedure, including Rule 26(e).

32 REQUEST FOR PRODUCTION NO. 48: Produce all files and
33 DOCUMENTS as they are maintained by YOU or are available to
34 YOU for the East Poplar Oil Field including, but not limited
35 to the following:

- a. Engineering files (including lease files, unit files, well files and all other types of reservoir engineering, drilling, engineering, and production engineering files);
- b. Geological and geophysical files (including prospect files, lease files, oilfield files, etc.);
- c. Accounting files;
- d. Well files and other DOCUMENTS dealing with drilling, completing, operating, plugging and site restoration;
- e. Well files and other DOCUMENTS dealing with the construction, maintenance and closing of the oilfield pits and the disposal of pit contents;
- f. Unit Agreement and any other DOCUMENTS showing the names, addresses and working interests of persons who participated in the oilfield activities;
- g. Vendor invoices and field tickets;
- h. All forms of internal or externally generated daily drilling reports, daily operation reports, tour sheets;
- i. Employee time sheets to the extent they relate to work done on or adjacent to the Plaintiffs' property;
- j. Files or DOCUMENTS dealing with POLLUTION;
- k. Proceedings of any kind concerning Montana regulatory agencies;
- l. Executed or unexecuted landowner surface and/or subsurface damage release for the Plaintiffs' property and DOCUMENTS showing payments made to landowner for surface and/or subsurface damage;
- m. All annular injection reports;
- n. All State of Montana and EPA (Mechanical Integrity Test Reports) MIT's;
- o. All water analyses of injected fluids;

- 1 p. All drilling reports, completion reports and
workover reports;
- 2 q. All applications for injection and permits for
3 injection of fluids with the Montana Board of Oil and Gas
Conservation;
- 4 r. All easements or other DOCUMENTS through which YOU
5 claim the right to POLLUTE the property;
- 6 s. All plugged and abandoned well reports;
- 7 t. All wellbore schematics for all injection wells;
- 8 u. All reports dealing with production & injection of
9 fluids including: Montana Board of Oil and Gas
Conservation reports, internal company production and
injection reports, and all other reports;
- 10 v. All completion reports and Intent to Drill forms
11 filed with the Montana Board of Oil and Gas Conservation
and Federal regulatory agencies;
- 12 w. All corrosion reports;
- 13 x. All unit and/or lease operating statements showing
14 production revenue and expense associated with the
oilfield operations; and
- 15 y. All DOCUMENTS relating to substances used in wells,
16 including, but not limited to, acid inhibitors,
bactericides, corrosion inhibitors, frac fluids, break-
17 down and treating fluids, paraffin chemicals, and
polychlorinated biphenyls.
- 18 z. Maps, plats and schematics of all kinds (including:
19 lease maps; well maps; facility maps and other oilfield
related maps, plats and schematics);
- 20 aa. All well logs;
- 21 bb. All environmental assessments, reviews and cleanup
plans;
- 22 cc. All engineering, geological and environmental
23 studies; and
- 24

1 dd. All DOCUMENTS dealing in any way with NORM
2 radiation.

3 GENERAL RESPONSE AND OBJECTIONS: Murphy E&P objects to
4 this request (subparts a-dd) on the basis that this request is
5 unduly burdensome inasmuch as it would require the production
6 of a huge number of documents covering approximately a 50 year
7 period, with most of the documents having no relevance to the
8 plaintiffs' claims. Murphy E&P further objects to this
9 request (subparts a-dd) on the basis that the request is
10 cumulative and/or duplicative of other discovery requests
11 already forwarded to Murphy E&P by the plaintiffs. Without
12 waiving the above objections, and subject to any other
13 specific objections set forth below, Murphy E&P states that
14 it will produce for inspection by the plaintiffs non-protected
15 records and documents, if any, which are maintained by Murphy
16 E&P and which are responsive to this request at those offices
17 of Murphy E&P wherein such records, if any, are maintained in
18 the usual course of Murphy E&P's business activities. Those
19 offices are located in New Orleans, Louisiana, Poplar,
20 Montana, and El Dorado, Arkansas. Such records will be made
21 available for review upon reasonable notice during regular
22 business hours.

23 Answering each subpart:

24 (a) Murphy E&P incorporates the above General Response
and Objections.

(b) Murphy E&P specifically objects to the production of
"prospect files" to the extent such files relate to undrilled
or undeveloped prospects. These files are equivalent to trade
secrets, and are not relevant to the plaintiffs' claims. As
to the remaining files, Murphy E&P incorporates the above
General Response and Objections.

(c) Murphy E&P specifically objects to this subpart on
the basis that such files do not contain matters relevant to
the plaintiffs' claims, and such files are not likely to lead
to the discovery of admissible evidence.

(d) Murphy E&P incorporates the above General Response
and Objections.

(e) Murphy E&P incorporates the above General Response
and Objections.

1 (f) Murphy E&P incorporates the above General Response
and Objections.

2 (g) Murphy E&P specifically objects to that portion of
3 this subpart which seeks "vendor invoices" without limitation
4 to matters relevant to plaintiffs' claims. Subject to this
additional objection, Murphy E&P incorporates the above
General Response and Objections.

5 (h) Murphy E&P specifically objects that this request is
6 ambiguous as to its scope and requires speculation as to what
7 is covered by this Request. Subject to this additional
objection, Murphy E&P incorporates the above General Response
and Objections.

8 (i) Murphy E&P incorporates the above General Response
9 and Objections.

10 (j) Murphy E&P specifically objects to this Request and
11 to the definitions given by the plaintiffs to the word
"Pollution," on the basis that this Request is ambiguous and
12 requires speculation as to what is covered by this Request.
Subject to this additional objection, Murphy E&P incorporates
the above General Response and Objections.

13 (k) Murphy E&P specifically objects to this Request to
14 the extent it seeks information or otherwise relates to
matters that are not relevant to plaintiffs' claims. Murphy
E&P further specifically objects and states that such matters
15 can be obtained by plaintiffs from the public agencies wherein
any proceedings were conducted. Subject to these additional
16 objections, Murphy E&P incorporates the above General Response
and Objections.

17 (l) Murphy E&P specifically objects that this Request is
18 ambiguous as to its scope and requires speculation by Murphy
E&P as to what and whom are covered by this Request. Subject
19 to this additional objection, Murphy E&P incorporates the
above General Response and Objections.

20 (m) Murphy E&P incorporates the above General Response
21 and Objections.

22 (n) Murphy E&P specifically objects that the records
23 requested by this Request can be obtained from public record
sources. Subject to this additional objection, Murphy E&P
24 incorporates the above General Response and Objections.

1 (o) Murphy E&P incorporates the above General Response
and Objections.

2 (p) Murphy E&P incorporates the above General Response
3 and Objections.

4 (q) Murphy E&P objects to this Request and states that
such records are obtainable from the Montana Board of Oil and
5 Gas Conservation. Subject to this additional objection,
Murphy E&P incorporates the above General Response and
6 Objection.

7 (r) Murphy E&P specifically objects to this Request and
to the definition given by the plaintiffs to the word
8 "Pollution," on the basis that this Request is ambiguous and
requires speculation as to what is covered by this Request.
9 Further, Murphy E&P does not admit that it has polluted any
property, nor has Murphy asserted any claim to any right to
10 pollute property. Subject to these additional objections,
Murphy E&P incorporates the above General Response and
11 Objections.

12 (s) Murphy E&P incorporates the above General Response
and Objections.

13 (t) Murphy E&P incorporates the above General Response
14 and Objections.

15 (u) Murphy E&P specifically objects to this Request on
the basis that it is ambiguous as to its scope. Murphy E&P
16 further objects to that portion of the Request related to
reports filed with the Montana Board of Oil and Gas
conservation inasmuch as such reports are obtainable from that
17 Board. Subject to these additional objections, Murphy E&P
incorporates the above General Response and Objections.

18 (v) Murphy E&P objects to this Request inasmuch as the
19 requested documents are otherwise obtainable from the boards
and/or agencies referenced in such Request. Subject to this
20 additional objection, Murphy E&P incorporates the above
referenced General Response and Objections.

21 (w) Murphy E&P incorporates the above General Response
22 and Objections.

23 (x) Murphy E&P objects to this Request on the basis that
the information requested is not relevant to the issues in
24 dispute, nor is the requested information calculated to lead

1 to the discovery of admissible evidence. Production revenue
2 and expense statements have no relevance to any asserted
liability of Murphy E&P.

3 (y) Murphy E&P incorporates the above General Response
and Objections.

4 (z) Murphy E&P incorporates the above General Response
5 and Objections.

6 (aa) Murphy E&P incorporates the above General Response
and Objections.

7 (bb) Murphy E&P incorporates the above General Response
8 and Objections.

9 (cc) Murphy E&P incorporates the above General Response
and Objections.

10 (dd) Murphy E&P objects to this Request on the basis that
11 the information requested is not relevant to the issues in
dispute, nor is the requested information calculated to lead
12 to the discovery of admissible evidence. The requested data
has no relevance to any claim asserted against Murphy E&P.

13 REQUEST FOR PRODUCTION NO. 49: Produce all DOCUMENTS
14 indicating any POLLUTION ever occurred to the surface or
subsurface as a result of oilfield activities in the East
15 Poplar Oil Field.

16 RESPONSE: Murphy E&P objects to this Request and states
that it is duplicative of Request for Production No. 48,
17 subpart (j). Murphy E&P further objects to this Request and
to the definition given by the plaintiffs to the word
18 "Pollution," on the basis that the Request is ambiguous and
requires speculation as to what is covered by the Request.
19 Without waiving these objections, Murphy states that it will
produce for inspection by the plaintiffs those records and
documents, if any, which are maintained by Murphy E&P and
20 which are responsive to this Request. These records, if any,
may be reviewed at those offices of Murphy E&P wherein such
21 records are maintained in the usual course of Murphy E&P's
business activities. Those offices are located in New
22 Orleans, Louisiana, Poplar, Montana, and El Dorado, Arkansas.
Such records will be made available for review upon reasonable
23 notice during regular business hours.

1 **REQUEST FOR PRODUCTION NO. 50:** All DOCUMENTS indicating
2 any cleanup of POLLUTION that YOU have done or directed to be
done in the East Poplar Oil Field.

3 **RESPONSE:** Murphy E&P objects to this Request and states
4 that it is duplicative of Request for Production No. 48,
5 subpart (j). Murphy E&P further objects to this Request and
6 to the definition given by the plaintiffs to the word
7 "Pollution," on the basis that the Request is ambiguous and
8 requires speculation as to what is covered by the Request.
9 Without waiving these objections, Murphy states that it will
10 produce for inspection by the plaintiffs those records and
documents, if any, which are maintained by Murphy E&P and
which are responsive to this Request. These records, if any,
may be reviewed at those offices of Murphy E&P wherein such
records are maintained in the usual course of Murphy E&P's
business activities. Those offices are located in New
Orleans, Louisiana, Poplar, Montana, and El Dorado, Arkansas.
Such records will be made available for review upon reasonable
notice during regular business hours.

11 **REQUEST FOR PRODUCTION NO. 51:** All environmental
12 assessments and all DOCUMENTS relating to environmental
assessments in the East Poplar Oil Field.

13 **RESPONSE:** Murphy E&P objects to this Request and states
14 that it is duplicative of subpart (bb) of Request for
15 Production No. 48. Without waiving this objection, Murphy E&P
16 states that it will produce for inspection by the plaintiffs
17 those documents, if any, which are maintained by Murphy E&P
18 and which are responsive to this request, although Murphy E&P
19 does not believe that any environmental assessments are in its
possession. Such documents, if any, may be reviewed at those
offices of Murphy E&P wherein such records are maintained in
the usual course of Murphy E&P's business activities. Those
offices are located in New Orleans, Louisiana and Poplar,
Montana. Such records, if any, will be made available for
review upon reasonable notice during regular business hours.

20 **REQUEST FOR PRODUCTION NO. 52:** Please provide copies of
21 any and all DOCUMENTS used, needed or IDENTIFIED in response
22 to Interrogatories served on the same date herewith by
Plaintiffs.

23 **RESPONSE:** Murphy E&P objects to this Request on the
24 basis that this Request is ambiguous and confusing. The only
"Interrogatories served on the same date" as this Request are

1 Interrogatories 28 and 29, both of which relate to documents
2 that are not being produced.

3 REQUEST FOR PRODUCTION NO. 53: Please provide a copy of
4 YOUR Annual Reports and 10-K's for the period from January 1,
5 1990 to present. If YOU do not prepare such DOCUMENTS, then
6 please provide YOUR audited financials (or unaudited, if you
do not have audited financials). If this financial
information concerning YOU is included in the reports of a
parent corporation, please provide the same information for
the parent corporation.

7 RESPONSE: Murphy E&P does not prepare annual reports or
8 10-K filings. Murphy E&P has previously provided to the
9 plaintiffs Murphy E&P's consolidated financial statements for
10 the years 1995, 1996 and 1997. The 1998 consolidated
11 financial statement of Murphy E&P will be produced when it is
completed. Murphy objects to production of financial
statements for years 1990, 1991, 1992, 1993 and 1994 on the
grounds that they are not relevant and not likely to lead to
the discovery of admissible evidence.

12 REQUEST FOR PRODUCTION NO. 54: Please produce any aerial
13 photographs and any other pictures in YOUR possession,
together with the date each was taken and by whom they were
taken, which show any portion of the East Poplar Oil Field.

14 RESPONSE: Murphy E&P states that all photographs,
15 together with any identifying information regarding such
16 photographs, will be produced for inspection by the plaintiffs
at the offices of Murphy E&P wherein such photographs are
17 maintained in the usual course of Murphy E&P's business
activities. Those offices are located in New Orleans,
18 Louisiana, Poplar, Montana and El Dorado, Arkansas. Such
photographs will be made available for review upon reasonable
notice during regular business hours.

19 REQUEST FOR PRODUCTION NO. 55: Please provide copies of
20 any inspection reports, citations, review reports, or other
DOCUMENTS dealing with the East Poplar Oil Field and relating
21 to the Montana Board of Oil and Gas Conservation, the Fort
Peck Tribes, the Bureau of Land Management, the Bureau of
22 Indian Affairs, the EPA and the Montana Department of Natural
Resources.

23 RESPONSE: Murphy E&P objects to this Request as being
24 confusing, overbroad and unreasonable. Murphy E&P also

1 objects that this Request is duplicative of prior requests.
2 Further, Murphy E&P objects that this request does not appear
3 to be limited to matters relevant to the plaintiffs' claims or
4 to matters likely to lead to admissible evidence. Murphy E&P
5 further notes that any documents in its possession relate only
6 to matters involving Murphy E&P. Without waiving these
7 objections, Murphy E&P would advise that responsive documents,
8 if any, authored by the governmental agencies referenced which
9 are in the possession of Murphy E&P may be reviewed at the
10 locations where those records are maintained in the usual
11 course of Murphy E&P's business activities. Those offices are
12 located in Poplar, Montana and New Orleans, Louisiana. Such
13 records, if any, will be made available for review upon
14 reasonable notice during regular business hours.

8 REQUEST FOR PRODUCTION NO. 56: Please produce all
9 DOCUMENTS dealing with surface water and groundwater in the
10 East Poplar Oil Field.

10 RESPONSE: Murphy E&P objects to this Request as being
11 overbroad and unreasonable. Murphy E&P also objects that the
12 Request is duplicative and that it does not appear to be
13 limited to matters relating to the plaintiffs' claims or to
14 matters likely to lead to admissible evidence. Murphy E&P
15 further states that it does not possess "all documents"
16 dealing with surface and groundwater within the East Poplar
17 Oil Field. Without waiving these objections, Murphy E&P would
18 advise that responsive documents, if any, responsive to this
19 Request and not otherwise protected or privileged which are in
20 the possession of Murphy E&P may be reviewed at the locations
21 where those records are maintained in the usual course of
22 Murphy's business activities. Those offices are located in
23 Poplar, Montana and New Orleans, Louisiana. Such records will
24 be made available for review upon reasonable notice during
regular business hours.

19 REQUEST FOR PRODUCTION NO. 57: If you have any policy or
20 procedure maintained relating to prevention of oilfield
21 POLLUTION such as that complained of in this lawsuit, please
22 provide a copy of all such policies or procedures along with
23 the designation of the date of effectiveness of these policies
24 and procedures and to whom they were distributed.

22 RESPONSE: Initially, Murphy E&P states that it objects
23 to the plaintiffs' definition of "Pollution" and states that
24 such definition is confusing, ambiguous and exceeds the
matters set forth in plaintiffs' complaint. Murphy E&P

1 further states that it does not admit or agree that any
2 pollution has herein occurred. With such objections and
3 clarification noted, attached hereto are the following:

4 1. June 11, 1993 Operating Procedures Memo on
5 Environmental Guidelines;

6 2. April 10, 1990 Operating Procedures Memo on
7 Environmental Guidelines;

8 3. March 17, 1995 Operating Procedures Memo on
9 Environmental Protection and Compliance;

10 4. April 1, 1988 Operating Procedures Memo on
11 Environmental Protection and compliance.

12 REQUEST FOR PRODUCTION NO. 58: Please produce any
13 reports, maps and laboratory analyses dealing with all soil,
14 structure and water testing done in the East Poplar Oil Field.

15 RESPONSE: Murphy E&P objects that this Request is
16 overbroad and burdensome, and is not limited to matters
17 relevant to the plaintiffs' claims or to matters likely to
18 lead to admissible evidence. Without waiving those
19 objections, non-protected documents, if any, responsive to
20 this Request which are in the possession of Murphy E&P may be
21 reviewed at those locations where such records are maintained
22 in the usual course of Murphy E&P's business activities.
23 Those offices are located in New Orleans, Louisiana and
24 Poplar, Montana. Such records, if any, will be made available
for review upon reasonable notice during regular business
hours.

REQUEST FOR PRODUCTION NO. 59: Please produce copies of
any and all field notes, reports, test results, photographs, .
or any data prepared by Defendant's experts and consultants.
This is intended to be a continuing request. As new data is
prepared, we wish to be provided with copies.

RESPONSE: Murphy E&P objects to this Request to the
extent it seeks to impose disclosure requirements beyond those
required under the Rules of Civil Procedure, to the extent it
seeks information otherwise protected by work product or other
privileges, or to the extent it seeks information regarding
non-testifying experts. Without waiving these objections,
Murphy E&P states that it has not yet retained any experts or
consultants who are expected to be called as witnesses at
trial. Murphy E&P states that when it has retained such an

1 expert, it will provide to plaintiffs such expert(s) identity
2 and such other information as may be required by applicable
Rules of Civil Procedure or by orders of the court entered
herein pertaining to such disclosure.

3 REQUEST FOR PRODUCTION NO. 60: Please produce YOUR
4 written document retention policy (including all present and
past versions).

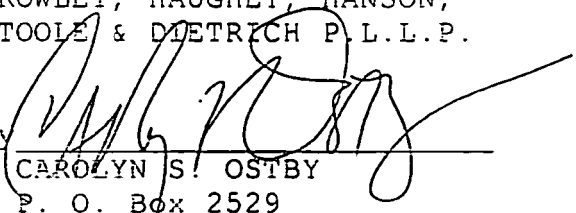
5 RESPONSE: The record retention policy applicable to
6 Murphy E&P's exploration and production activities is attached
7 hereto, including the schedules for Production, Production-
8 Engineering, Land Division Orders, Land-Lease Acquisitions,
9 Land-Records and Exploration. Murphy E&P objects to the
request to the extent it seeks schedules or other information
unrelated to exploration and production, on the basis that
such other information is not relevant to the plaintiffs'
claims or to matters likely to lead to admissible evidence.

10 REQUEST FOR PRODUCTION NO. 61: Please produce any
11 DOCUMENTS which YOU claim give YOU the right to POLLUTE any
12 portion of the East Poplar Oil Field with saltwater, oil, NORM
radiation or any other oilfield POLLUTANTS.

13 RESPONSE: Murphy E&P objects to this Request and to the
14 definition of "Pollute" provided for within plaintiffs'
15 Requests, on the basis that the Request is ambiguous and
16 unclear. Murphy E&P further objects to the extent the Request
17 seeks information or otherwise relates to matters that are not
18 relevant to plaintiffs' claims as set forth in their
19 complaint. Further, Murphy does not admit or agree that any
20 pollution has herein occurred, and asserts that this Request
is argumentative in nature and not intended to solicit
relevant information or information likely to lead to
admissible evidence. Finally, Murphy E&P objects to this
Request on the grounds that it calls for conclusions of law,
and not factual information. The court will determine if
pollution has occurred within the East Poplar Oil Field, and
if so, whether Murphy E&P contributed in any way to any such
pollution.

1 DATED this 30th day of April, 1999.

2 CROWLEY, HAUGHEY, HANSON,
3 TOOLE & DIETRICH P.L.L.P.

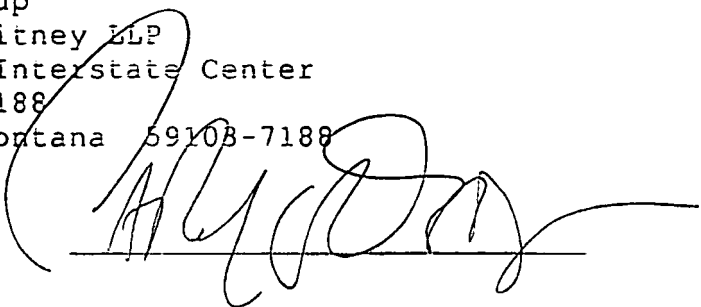
4 By 
5 CAROLYN S. OSTBY
6 P. O. Box 2529
7 Billings, MT 59103-2529
8 Attorneys for Defendants
9 Murphy Oil USA, Inc. and
Murphy Exploration &
Production Co.

9 CERTIFICATE OF SERVICE

10 I, hereby certify that on the 30th day of April, 1999,
11 a copy of the foregoing was served by First Class Mail upon
12 the following counsel of record:

13 Richard J. Dolan
14 Robert K. Baldwin
15 Goetz, Gallik, Baldwin & Dolan, P.C.
16 35 North Grand
17 P. O. Box 428
18 Bozeman, Montana 59771-0428

16 John Walker Ross
17 Brown Law Firm, P.C.
18 315 North 24th Street
19 P. O. Drawer 849
20 Billings, Montana 59103-0849

19 Robert Sterup
20 Dorsey & Whitney LLP
21 1200 First Interstate Center
22 P. O. Box 7188
23 Billings, Montana 59108-7188
24 



OPERATING
PROCEDURE

CLASSIFICATION & NO.		PAGE
LAW	05-01-08	1 OF 2
REPLACES		
New		
DATE ISSUED	DATE EFFECTIVE	DIST. CODE
04-01-88	04-01-88	

AFFECTS

All Company Facilities affected by Environmental Laws and Regulations.

All Employees.

PURPOSE

To establish formally the Company's Environmental Policy and to assign responsibilities for the overall coordination and confirmation of its implementation and administration.

SUBJECT General -- Environmental protection and compliance with the letter and spirit of existing laws and regulations.

Policy:

The Company has had a long standing policy of complying fully with all the environmental laws and regulations and to promote a safe and clean environment for its employees and the community. The Company recognizes that a sound policy is necessary to provide the foundation for and the impetus for sound environmental practices and programs. Therefore, this Policy commits the Company to fully comply with all rules and regulations relating to the environment and to conduct its operations in a way which prevents significant pollution or interference with the environment.

Responsibility:

A. The Environmental Affairs Coordinator is to stay abreast of the applicable state and federal environmental laws and regulations affecting the Company and keep the operating departments informed of these laws and regulations. He is to act as the technical interpretator of the requirements of those laws and regulations, and when necessary, will assist the legal department in determining the legal implications of said laws and regulations. He will act as the coordinator between the facilities and their operating departments on environmental affairs. He is to establish programs which will assure compliance with these laws and regulations and aid in handling complaints and charges of noncompliance when necessary.

B. Facility managers are required to operate and maintain their facilities in conformity with all applicable environmental laws and regulations unless prevented in doing so by unforeseeable or uncontrollable events. Compliance is to be maintained without regard to the degree of enforcement. Avoidable delays in achieving full compliance must not be allowed to occur. While corporate assistance is available and environmental concerns are expected to be communicated to the Environmental Affairs Coordinator, compliance and knowledge of the applicable laws and regulations is facility management's responsibility. Citations or notices of violations received at facilities will be brought to the attention of facility management who will review the

ISSUED BY

Law Department



OPERATING
PROCEDURE

CLASSIFICATION & NO.
EXECUTIVE

01-01-23

PAGE
1 OF 2

REPLACES

01-01-23 issued April 10, 1990 (*Indicates revision)

DATE ISSUED

June 11, 1993

DATE EFFECTIVE

Immediately

DIST. CODE

1

* AFFECTS

Murphy Oil Corporation
Murphy Exploration & Production Company
Murphy Oil USA, Inc.
Murphy Eastern Oil Company
Murphy Oil Company Ltd.
Deltic Farm & Timber Co., Inc.
El Dorado Engineering Inc.

PURPOSE

To codify the Company's longstanding commitment to safe and environmentally responsible operations by setting forth a comprehensive set of guiding environmental principles for the management and operation of the Company's businesses.

SUBJECT

Environmental Guidelines

* Murphy Oil Corporation (Murphy) is dedicated to continuous efforts to improve the compatibility of our operations with the environment while economically developing energy resources and supplying high quality products and services to consumers. Murphy recognizes the importance of efficiently meeting society's needs and our responsibility to work with the public, the government, and others to develop and to use natural resources in an environmentally sound manner while protecting the health and safety of our employees and the public. To meet these responsibilities, Murphy will manage its businesses according to these principles:

1. To recognize and to respond to community concerns about our raw materials, products and operations.
2. To operate our plants and facilities and handle our raw materials and products in a manner that protects the environment, and the safety and health of our employees and the public.
3. To make safety, health and environmental considerations a priority in our planning, and our development of new products and processes.
4. To advise promptly appropriate officials, employees, customers and the public of information on significant industry-related safety, health and environmental hazards, and to recommend protective measures.
5. To counsel customers, transporters and others in the safe use, transportation, and disposal of our raw materials, products and waste materials.
6. To economically develop and produce natural resources and to conserve those resources by using energy efficiently.
7. To extend knowledge by conducting or supporting research on the safety, health and environmental effects of our raw materials, products, processes and waste materials.

ISSUED BY

Records and Procedures



OPERATING
PROCEDURE

CLASSIFICATION & NO.
ADMINISTRATIVE

01-01-23

PAGE
1 OF 2

REPLACES

None

DATE ISSUED

April 10, 1990

DATE EFFECTIVE

Immediately

DIST. CODE

AFFECTS

Murphy Oil Corporation and Subsidiary Companies.

PURPOSE

To codify the Company's longstanding commitment to safe and environmentally responsible operations by setting forth a comprehensive set of guiding environmental principles for the management and operation of the Company's businesses.

SUBJECT

Environmental Guidelines

The Company pledges to manage its businesses according to the following principles:

1. To recognize and to respond to community concerns about our raw materials, products and operations.
2. To operate our plants and facilities, and to handle our raw materials and products in a manner that protects the environment, and the safety and health of our employees and the public.
3. To make safety, health and environmental considerations a priority in our planning, and our development of new products and processes.
4. To advise promptly appropriate officials, employees, customers and the public of information on significant industry-related safety, health and environmental hazards, and to recommend protective measures.
5. To counsel customers, transporters and others in the safe use, transportation and disposal of our raw materials, products and waste materials.
6. To economically develop and produce natural resources and to conserve those resources by using energy efficiently.
7. To extend knowledge by conducting or supporting research on the safety, health and environmental effects of our raw materials, products, processes and waste materials.
8. To commit to reduce overall emissions and waste generation.
9. To work with others to resolve problems created by handling and disposal of hazardous substances from our operations.

ISSUED BY

Executive Department

AFFECTS

All Company Facilities affected by Environmental Laws and Regulations.

All Employees.

PURPOSE

To establish formally the Company's Environmental Policy and to assign responsibilities for the overall coordination and confirmation of its implementation and administration.

SUBJECT

01: General - Environmental protection and compliance with the letter and spirit of existing laws and regulations.

I. Policy:

The Company has had a long standing policy of complying fully with all the environmental laws and regulations and to promote a safe and clean environment for its employees and the community. The Company recognizes that a sound policy is necessary to provide the foundation for and the impetus for sound environmental practices and programs. Therefore, this Policy commits the Company to fully comply with all rules and regulations relating to the environment and to conduct its operations in a way which prevents significant pollution or interference with the environment.

II. Responsibility:

- * A. The Corporate Safety & Environmental Affairs Manager is to stay abreast of the applicable state and federal environmental laws and regulations affecting the Company and keep the operating departments informed of these laws and regulations. He is to act as the technical interpretator of the requirements of those laws and regulations, and when necessary, will assist the legal department in determining the legal implications of said laws and regulations. He is to work with the operating companies to establish programs which will assure compliance with those laws and regulations and aid in handling complaints and charges of noncompliance when necessary.
- * B. Facility managers are required to operate and maintain their facilities in conformity with all applicable environmental laws and regulations unless prevented in doing so by unforeseeable or uncontrollable events. Compliance is to be maintained without regard to the degree of enforcement. Avoidable delays in achieving full compliance must not be allowed to occur. While corporate assistance is available and environmental concerns are expected to be communicated to the Corporate Safety & Environmental Affairs Manager, compliance and knowledge of the applicable laws and regulations is facility management's responsibility. Citations or notices of violation received at facilities will be brought to the attention of facility

RECORDS RETENTION PROGRAM

RECORDS

A. Retention Schedule

1. Attached is a Records Retention Schedule ("Schedule") which has been prepared by the departments involved and approved by management representatives. The Schedule fixes the retention period for the particular record, and at the expiration of the applicable retention period, the record will be scheduled for destruction, subject to the review procedure described herein.
2. A Records Retention Committee ("Committee") will be established and will meet semi-annually, or more often as deemed advisable, for the purpose of reviewing the Records Retention Program ("Program") and suggesting or approving changes in the Program and Schedule.
3. If a department creates a new class of record which does not appear on the Schedule, it should advise the Committee and recommend a retention period.
4. The Program is purposely decentralized with each department having responsibility for implementing and maintaining the Program in relation to its records. Therefore, each department will order storage boxes as needed from General Services, place the records in the storage boxes, and mark the storage boxes with the proper information as provided for herein.

B. Selecting Records for Storage

Each department will have the responsibility of determining when records should be moved from on-premises filing space to off-site storage. It is not efficient to transfer records with relatively short retention periods, especially when no appreciable savings in on-premise filing space will result. Therefore, most departments should find sufficient a semi-annual or annual review of records for possible removal to storage (or immediate destruction).

C. Preparing Records for Transfer to Storage

1. Remove all material for which there is no justification for retention - duplicates, work drafts, etc.
2. Make certain that folder labels or other identification on records are complete and legible.
3. Check to see that files are complete. If an important item is missing, try to locate it before placing the file in storage.

4. Pack records firmly in the storage box, but do not force records so that the shape of the box is distorted. Records with different retention periods should not be placed in the same storage box.
5. Departments should coordinate their retention plans so that only the originals of contracts, invoices, etc. are sent to storage. If a department is aware that another department will likely have the same record, the departments should reach an agreement as to which department's files will be considered the primary file for a particular matter or type of record. The originating department will most likely be considered to have the primary file for a record.

D. Transferring Records to Storage

1. A Destruction Authorization Form ("Form") must be prepared for each box to be sent to off-site storage. The Form should include a description of the records contained in the storage box sufficient for the originating department to be familiar with the contents of the box several years later by simply reading the description.
2. The review date to be entered on the Form is the date of expiration for the records in the storage box pursuant to the Schedule. All records in a storage box shall have the same retention period.
3. The procedure for preparing and sending a storage box to off-site storage shall be as follows:
 - a. Prepare a Form on the typewriter. The sections to be filled out are "Originating Department," "Prefix - Box Number Contents," "Review Date," and place an "x" in the box before either "Normal Destruction" or "Sensitive Material."
 - b. Mark the storage box with the prefix for the department and the box number. This should be done within the red stamp imprinted on two sides of each box; both stamped sides should be appropriately marked. The completion of the remainder of the items called for within the stamped area shall be at the discretion of the department.
 - c. Retain the original and yellow copy of the Form as a departmental record of the storage box, its contents, and its destruction date.
 - d. Send the pink copy of the Form to the attention of Kenna Williams in General Services.
 - e. Contact General Services for removal of the storage box to off-site storage.

E. Change in Status of Records

In the event of threatened or actual litigation, receipt of a subpoena or other investigative demand, or upon the happening of any circumstance which makes it likely that records should be preserved beyond their established retention period, the Committee should be notified and advised of the records involved. The "Review Date Suspended To" and "Explanation" sections of the applicable Form shall be completed, and such records will be retained until destruction can be authorized by the originating department, Law and Tax.

F. Destruction of Records

1. General Services will be responsible for the actual destruction of records. Those records containing sensitive material will be burned or shredded; all other records will be disposed of as General Services sees fit.
2. Each department should periodically review its file on records sent to off-site storage. When the review date on a Form has arrived, the department will confirm the retention requirements of the contents of the applicable storage box.
3. The departmental reviewer will indicate his/her identity and date of review on the Form. The reviewer will either (a) approve the destruction of the contents by signing and dating the appropriate section or (b) designate a revised date for disposal by completing the "Review Date Suspended To" and "Explanation" sections of the Form.
4. After the originating department has given approval for destruction, the original of the Form will be sent to the Law Department. (The yellow copy shall be kept by the originating department until the process is completed, thus serving as a backup in case the original is lost in transit.) The Law Department reviewer, after conferring with all attorneys familiar with the contents, will either (a) approve the destruction of the contents by signing and dating the appropriate section of the Form or (b) designate a revised date for disposal by completing the "Review Date Suspended To" and "Explanation" sections of the Form.
5.
 - a. If the Law Department reviewer suspends the review date, the original Form will be returned to the originating department to be called up again by the department at the new review date.
 - b. If the Law Department reviewer gives approval for destruction, the original Form will be sent directly to the Tax Department.

6. The Tax Department reviewer will either (a) approve the destruction of the contents by signing and dating the appropriate section of the Form or (b) designate a revised date for disposal by completing the "Review Date Suspended To" and "Explanation" sections of the Form. The Form will then be sent directly to the originating department.
7.
 - a. If the Tax Department reviewer suspends the review date, the originating department will place the Form back in its file to be called up again at the new review date.
 - b. If the Tax Department reviewer gives approval for destruction, the originating department should note the complete destruction authorization on the yellow copy of the Form by copying the names and dates of the approval signatures.
8. The original of the Form will then be forwarded by the originating department to General Services for destruction. Following destruction of the records, the Form, appropriately endorsed by General Services, will be returned to the applicable department for permanent filing. At that time, the yellow copy of the Form may be thrown away.
9. General Services will keep a master list of all Forms. After the original Form has been endorsed by General Services upon the destruction of the storage box, General Services will copy the information on the original Form onto its pink copy of the Form before it returns the original Form to the originating department. The pink copy will be permanently maintained in the master list kept by General Services.

DESTRUCTION AUTHORIZATION FORM

ORIGINATING DEPARTMENT _____ PREFIX - BOX NUMBER _____

CONTENTS: _____

REVIEW DATE: _____

REVIEW DATE SUSPENDED TO: _____

EXPLANATION _____

BY _____ DATE _____

DESTRUCTION APPROVED:

☐

NORMAL DESTRUCTION

☐

SENSITIVE MATERIAL

ORIGINATING DEPARTMENT BY _____ DATE _____

LAW DEPARTMENT BY _____ DATE _____

TAX DEPARTMENT BY _____ DATE _____

BOX DESTROYED BY _____ DATE _____

RECORD RETENTION LIST

<u>DEPARTMENT</u>	<u>BOX PREFIX</u>	<u>RETENTION</u>
Accounting	X	X
Auditing		
Administrative Services	X	X
Corporate Accounting		X
Corporate Insurance		X
Credit	X	X
Deltic Farm & Timber	X	
Exploration	X	X
General Corporate		X
Income & Franchise	X	X
Information Systems		
Land & Contracts	X	X
Law	X	X
Manufacturing	X	X
Marketing	X	X
Production	X	X
Purchasing	X	X
Treasury	X	X

Charles A. Ganus

LAW

January 30, 1986

Ronald G. Calloway

PROD

Records Retention

Attached hereto is a copy of the Records Retention Program ("Program"), the latest Records Retention Schedule ("Schedule") for your department, and several Destruction Authorization Forms ("Form"). Please read the Program carefully; the system will work best if there is uniform adherence. I trust the Program is understandable and workable, but please do not hesitate to contact me if something is not clear or if you have a suggestion to improve the Program, Schedule and/or Form.

The Program is effective January, 1986, so please see that storage boxes being prepared for off-site storage are done so in accordance with the provisions of the Program. Please note that Forms can be acquired as needed from General Services by asking for Form 35.

Pursuant to your suggestion in our conversation, the prefixes for the divisions in your department will be as follows:

PRO Production
PRO-E Production-Engineering

Please number the boxes so there is no confusion between the two divisions. I suggest each prefix begin with the number "1" and then be numbered consecutively, but the numbering system is to be left to the discretion of the department. The important point is a department should be able to retrieve the proper box by simply asking for a certain prefix and box number. Confusion in the numbering system can be avoided by coordinating the numbering system of your two divisions from the beginning.

Again, thank you for your efforts. I believe Murphy will reap tangible benefits from having an effective retention program. As always, I welcome your comments and suggestions.

CAG/nh

Attachments

PRODUCTION DEPARTMENT

<u>Name of Record</u>	<u>Recommended Retention (Years)</u>
American Petroleum Institute - Recommended Practices and Specifications and other industry related groups. Update on a continuing basis.	P
Commission Reports (Non-Operated) Regulatory Agency Reports	7
Engineering, Technical, and other reports and studies	P
Field and Lease Files - General Information and Correspondence	P
Field & Lease Maps	P
General Correspondence - Production and Drilling Operations	P
Individual Well Files, Including Well Histories	P
Journals and Special printings API, SPE	P
Lease Operating and Maintenance Costs	P
Miscellaneous Planning and Supporting work papers	P
Monthly Oil Well Reports	P
Operations Reports, including:	
District Reports of Activity	P
Drilling Operations Reports	P
Production Posting Books	P
Weekly Activity Letters	P
Weekly Production Reports	P
Production Personnel and Safety Information and Instructions	P
Regulatory Agency data, including: Rules & Regulations (States, EPA, USGS, BLM and BIA) and required report forms	P
Regulatory & General Production Reports (Not including 10-Day Production Gauge Reports)	P
Report of Operations	P
State General Correspondence	P
Statistical Data - Production and Operations Update on a continuing basis	P
Studies and evaluations - Work papers and associated data	P

Trade Literature (Equipment & Service Company Catalogs and Descriptive Bulletins) Update on a continuing basis	P
Water Disposal and Injection Reports	P
Well Logs & Test Information	P
Well Tests Postings	P

LEGEND:

P - Permanent

Charles A. Ganus

LAW

January 29, 1986

Pearl Watts

EXP

Records Retention

Attached hereto is a copy of the Records Retention Program ("Program"), the latest Records Retention Schedule ("Schedule") for your department, and several Destruction Authorization Forms ("Form"). Please read the Program carefully; the system will work best if there is uniform adherence. I trust the Program is understandable and workable, but please do not hesitate to contact me if something is not clear or if you have a suggestion to improve the Program, Schedule and/or Form.

The Program is effective January, 1986, so please see that storage boxes being prepared for off-site storage are done so in accordance with the provisions of the Program. Please note that Forms can be acquired as needed from General Services by asking for Form 35.

Pursuant to your suggestion in our conversation, the prefix for your department will be as follows:

EXP Exploration

I suggest you begin with the number "1" after the prefix and then number each box consecutively, but the numbering system is to be left to the discretion of the department. The important point is a department should be able to retrieve the proper box by simply asking for a certain prefix and box number.

Again, thank you for your efforts. I believe Murphy will reap tangible benefits from having an effective retention program. As always, I welcome your comments and suggestions.

CAG/nh

Attachments

EXPLORATION DEPARTMENT

<u>Name of Record</u>	<u>Recommended Retention (Years)</u>
AFE's	P
Area Recommendations	P
Area Reports	P
Basin Reports	P
Core Samples (wet and dry)	P
Geologic & Geophysical Files	P
Government Notices	Most Current Version
Gravity & Magnetism (folded prints)	P
Logs - Final prints	P
- Duplicate logs	3
- Sepias and films	P
Maps - Coverage	P
- Structure	P
- Trend	P
- U.S.G.S	P
Miscellaneous - Misc. subscription/prices	Replace as Prices Change
- Data available	Most Current Version
- Check requests	1
- Consultants correspondence	P
- Disaster planning	Until Updated
- Filing system	P
- Misc. orders	2
- Professional Societies	1
- Purchase requisitions	2
- Reading files	P
- Training courses	1
- Vacation schedule	2
- Log Catalogs	P
Prospect Files	P
Scouting Services - Ark. Oil & Gas Commission reports	2
- Log lists (catalogs)	1
- PI and Geomap weekly reports	1
Scout Cards (well history)	P
Service Companies	P

Transmittal Files	P
Tube Files - Cross Sections	P
- Geologic Base Maps	P
- Geologic Interpreted Maps	P
- Gravity & Magnetism	P
- Seismic sections	P
- Seismic sections (interpreted)	P
- Shot Point Base Maps	P
- Synthetic Seismograms	P
- Velocity Data	P
Velocity Data (folded prints)	P
Well Files (Abstract, plat, permit, prognosis, drilling program, daily drilling reports & completion reports)	P

LEGEND:

P - Permanent

Charles A. Ganus

LAW

January 30, 1986

Wayne C. Gibson

EXP

Records Retention

Attached hereto is a copy of the Records Retention Program ("Program"), the latest Records Retention Schedule ("Schedule") for your department, and several Destruction Authorization Forms ("Form"). Please read the Program carefully; the system will work best if there is uniform adherence. I trust the Program is understandable and workable, but please do not hesitate to contact me if something is not clear or if you have a suggestion to improve the Program, Schedule and/or Form.

The Program is effective January, 1986, so please see that storage boxes being prepared for off-site storage are done so in accordance with the provisions of the Program. Please note that Forms can be acquired as needed from General Services by asking for Form 35.

Pursuant to your suggestion in our conversation, the prefixes for the divisions in your department will be as follows:

LD-DO	Land-Division Orders
LD-L	Land-Lease Acquisitions
LD-R	Land-Records

Please number the boxes so there is no confusion between the three divisions. I suggest each prefix begin with the number "1" and then be numbered consecutively, but the numbering system is to be left to the discretion of the department. The important point is a department should be able to retrieve the proper box by simply asking for a certain prefix and box number. Confusion in the numbering system can be avoided by coordinating the numbering system of your three divisions from the beginning.

Again, thank you for your efforts. I believe Murphy will reap tangible benefits from having an effective retention program. As always, I welcome your comments and suggestions.

CAG/nh

Attachments

LAND & CONTRACTS DIVISION

<u>Name of Record</u>	<u>Recommended Retention (Years)</u>
Abstracted Information on Fee Lands, Books, Post Binders	P
Abstracts for Marketing Properties	Destroy those not affected by active files after statute of limitations period
Abstracts of Title, Deltic's Land	P
Abstracts of Title for Fee Properties	P
Acreage Reports & misc. Information	5
Active Lease Abstract Cards	Destroy when the lease file is destroyed
AFE Files - Active	Keep as long as active
AFE Files - Inactive	Destroy at time area goes inactive
Area Files - Active	Keep as long as active
Area Files - Inactive	Destroy 2 years from date they became inactive
Assignment of C. H. Murphy & Co. to Murphy Corporation, Munoco, Marine Oil to Murphy Corporation and Michigan Lease Documents and Other Material	P
Bond Files	Destroy when Bond is Cancelled
Cancelled Lease Abstract Cards	Destroy when the lease file is destroyed
Cancelled Lease Records Files	Should be retained for the statute of limitations period after cancellation (Only after IRS had audited file)
Card Files	P
Contract Files (M-Files)	P
Coverage Maps	P

Crude Purchase Files (where we disburse revenues)	When cancelled, destroy after statute of limitations if no money in suspense
Crude Purchase Files (100% Contracts)	Since these are duplicate copies, they can be destroyed when cancelled
Division Order Files	When production ceases, cancel and retain for same period as cancelled leases
Division Order Work Forms	P
Files on Deltic Fee Lands	P
Four Large Record Volumes of Manual Abstract of Record Forms of Oil and Gas Leases	Retain until information transferred to permanent computer lease record
Gas Contract Files	Retain until cancelled, then retain for statute of limitations period
General A to Z Files	5
GSI	P
Indices - 4 Drawers of 3x5 Cards	P
Lease Control Books	P
Lease Records, Drop Reports	10
Lease and Rental Control Books	P
Lease Rental Recommendations	3
Lease Sales	P
Lease Sale Files - BLM Competitive - Inland	5
Lease Sale Files - Federal OCS	10
Lease Sale Files - Indian	5
Lease Sale Files - State	10
Marketing Properties Files	After cancellation retain for the statute of limitations period

Miscellaneous Files - Check Request	1
- Consultants Correspondence	P
- Disaster Planning	Until Updated
- Employee Agencies	Send to Employee Relations
- Filing System	P
- Lease Information	5
- Miscellaneous Orders	2
- Professional Societies	1
- Purchase Requisitions	2
- Reading Files	P
- Training Courses	1
- Vacation Schedule	2

Miscellaneous Files
(Filed with Lease Files)

When production ceases,
cancel and retain for same
period as cancelled leases

Miscellaneous Files

Retain at our discretion
since very little file space
is required

Miscellaneous Information in Support
of Acquired Property

P

Non-Producing Oil and Gas Lease Record
Files

Should be retained for the
statute of limitations period
after cancellation (Only
after IRS has audited file)

Producing Lease Files
(Onshore and Offshore)

When production ceases,
transfer to non-producing for
their disposition

Prospect Files

P

Readers Files

Each month kept one year

Royalty Files Covering
Mineral and Royalty Interests

Destroy after the
cancellation of a file, after
the statute of limitations
period

Seven Volumes of Manually Abstracted
Lease Records - Post Binders

P

Simultaneous Federal Filings

5

Take-Off Files

Destroy 2 years after
becoming inactive

LEGEND:

P - Permanent

AN OPERATIONAL AND ENVIRONMENTAL ASSESSMENT,
EAST POPLAR UNIT OIL FIELD,
NORTHEAST MONTANA

Prepared for:

Assiniboine and Sioux Tribes of
Fort Peck Reservation

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APPENDIX B - Field Log - Summary of Inspected Production Equipment and Locations

APPENDIX C - Photograph Log of Inspected Production Equipment and Locations

1.0 INTRODUCTION

Holm Technical Services, Inc. (HTSI) completed an environmental and operational site inspection of the East Poplar Unit during November 1998. We completed this inspection at the request of Sonosky, Chambers, Sachse & Endreson, legal counsel to the Fort Peck Tribes in Poplar, Montana. Representatives of the Assiniboine and Sioux Tribes of the Fort Peck Reservation specified the scope of work that HTSI conducted during this November 1998 site inspection.

The scope of work includes conducting research and analysis, and preparing an evaluation and field assessment of the condition of East Poplar Unit oil field as a result of the oil and gas extraction activities conducted there. The scope of work also includes identifying any probable environmental damage due to oil field operations, and presenting the remediation options available to remedy the resulting damage.

2.0 BACKGROUND INFORMATION

2.1 Site Description and Location

The approximate center of the East Poplar Unit lies 8.5 miles northeast of Poplar in Roosevelt County, Montana. The oil field is further located in Township 28 North (T28N), Range 51 East (R51E); T29N, R50E; and T29N, R51E. The study area consists of 115 to 120 wells and associated crude oil and salt water processing facilities situated on approximately 26 sections of land within or adjacent to the designated East Poplar Unit (EPU) boundary. Appendix A contains four USGS 7.5 minute topographic maps showing the location of the wells, the processing equipment, and the EPU boundary.

The study area, located on the western flank of the Williston Basin, is approximately 65 miles west of Williston, North Dakota. Oil in the region is produced primarily from geologic strata of the Paleozoic Era. However, production within the study area consists of both oil and

natural gas. The oil is produced primarily from the Mississippian Charles formation at a depth ranging from 5,500 to 6,000 feet below surface. Natural gas is extracted from the Cretaceous Judith River formation at a depth ranging from 700 to 1,000 feet below grade.

2.2 Site Geology and Hydrogeology

The study area is situated on surface glacial till deposits of Quaternary age, Quaternary alluvial deposits of the Poplar River, or unconformable outcrops of Cretaceous Bear Paw shale (Ross *et. al.*, 1955). The Poplar River crosses the EPU from north-northeast to south-southwest, dissecting the field into two roughly equal halves. Oil field operations are conducted with minimum distances of one quarter mile or less between field wells and the Poplar River.

Groundwater is present beneath the study area at shallow depths in Quaternary alluvial deposits of the Poplar River valley system, and in Quaternary glacial till deposits located primarily east of the Poplar River (Thamke *et. al.*, 1996). Data from a water resources investigation report indicate that the Poplar River is seasonally a gaining stream along its course through the study area (Thamke *et. al.*, 1997). Using the data presented in these two investigations, groundwater movement in the aquifer is generally toward the Poplar River. Subsurface flows appear relatively perpendicular to the incised river valley from substantial distances away from the present river course and turn parallel to the river as they approach the present river channel.

2.3 Site History

Murphy Oil Company discovered oil in the Charles formation of the Mississippian Madison group rocks in March 1952. Murphy initially developed the field area on 320-acre spacing, and then redeveloped the field area using a 160-acre spacing pattern. Huber Oil owned a 120-acre tract in the south central portion of the field which it ultimately developed on 20-acre spacing. Murphy drilled a pilot project in the north central sector of the field utilizing 80-acre well spacing. HTSI assumes that this pilot project resulted in marginal apparent economic gain, and thus the 80-acre development program was not continued throughout the field area.

The EPU has produced over 46 million barrels of salable crude oil as of the March 1998 production figures (Petr. Inf., 1998). Murphy also produces salt water brines associated with the crude oil in the EPU. Salinity of the brines ranges from 17,000 to over 100,000 parts per million (ppm; Thamke *et. al.*, 1997). Thamke (1997) indicates that over 232 million barrels of salt water brine was produced in association with crude oil in their study area. This salt water was disposed largely by injection into Class II salt water injection wells. Thamke (1997) estimates that 214 to 1,428 million barrels of groundwater are presently impacted by releases that occurred while handling this salt water.

The Montana Board of Oil & Gas Conservation (BOGC) promulgates oil field regulations applicable to most Montana lands. These regulations are contained in the Administrative Rules of Montana (ARM). However, the Code of Federal Regulation (CFR) lays administrative authority on tribal and allotted lands with the Bureau of Land Management (BLM). In addition, some EPA regulations apply uniformly to both fee-owned and tribal and allotted tracts.

3.0 OVERVIEW OF OIL AND GAS OPERATIONS

The following section provides background information helpful to understanding oil field development and operation. The overview is intended to highlight the major considerations encountered in the process of finding and extracting crude oil. We assume these standard methods apply to the study area, and that this background information applies to environmental and operational conditions in the study area.

3.1 Drilling Operations

Modern oil well drilling utilizes the rotary drill and its associated techniques (Gatlin, 1960). A steel rock bit is rotated to cut a cylindrical hole into the strata of the earth. The chipped and abraded rock fragments are removed from the borehole annulus via a drilling mud. Mud is normally circulated down through the hollow drill pipe to the steel bit and returns to surface via the borehole annulus.

The Williston Basin strata have several very soluble salt zones incorporated within the normally penetrated geologic section (Thamke, 1997). Muds used in this province consisted of a salt-based (salt saturated) hydraulic system during the 1950's through about 1985. After this time, oil-based mud systems became more widely utilized. A salt-based mud system is prepared using a salt-saturated brine as a basic component (Gatlin, 1960). The salt saturated mud system avoids dissolving the naturally occurring salt zones in the well and causing severe mechanical drilling problems. A clay powder is added to the brine to create a thick (thixotropic) liquid. This "mud" appears to be a liquid when pressured or pumped, but will set up or become highly viscous when pumping ceases. The clay additive helps suspend the rock particles (cuttings) and remove them from the well. Another function of the mud is to counteract any high pressure zones of water, gas, or oil encountered while drilling. Usually barium sulfate is used to weight the mud to achieve enough pressure to offset any high-pressure zones. Other additives may be utilized to combat corrosion, increase lubrication, or seal a zone with very open porosity.

The mud returns are cycled through a shale shaker which removes a large portion of the rock fragments derived during the drilling process (Gatlin, 1960). When the EPU was discovered and developed, mud returns from the shale shaker were emptied into the Reserve Pit, where the mud was stored until recycled back into the borehole. Formerly, pits were unlined, and they contained salt-based muds for the approximate six to 13 week drilling cycle. Thus, salt water from the Reserve Pit could actively percolate downward into surface aquifers, resulting in saline contamination. Modern day operations utilize a lined pit, but generally store this mud actively in steel tankage adjacent to the Reserve Pit. The modern day Reserve Pit is now used primarily for emergency situations. Reserve pit regulations are contained in ARM 36.22.1005 or in 40 CFR 112.7 for the respective fee or tribal-allotted lands.

3.2 Well Completion

The geologic strata are drilled with fresh water until the entire section containing potable aquifers is penetrated (Gatlin, 1960). A surface conductor of approximately 12- to 16-inch

diameter extending from surface to total well depth is cemented into place. The cement is placed outside the conductor pipe, and it bonds the pipe to the earth annulus. The well is generally drilled to about 10.0 to 20 percent of the anticipated final depth. An approximate nine-inch diameter surface casing is then installed from surface to the total hole depth. This surface casing is cemented in place continuously from total depth to the base of the conductor. The well is drilled to its target depth using a smaller diameter bit. Production casing is then installed from the surface to the total depth of the hole, and is cemented into place from the base of the surface casing to the total well depth.

Prior to producing the well, a wire line tool is utilized to determine that the cement bond is adequate for a continuous 50-foot zone in competent rock both above and below any zone containing producible fluids (ARM, 36.22.1001; 40 CFR 146). Holes are shot into and through the casing wall to allow the desired fluids enter the wellbore (Gatlin, 1960). Wells in the EPU either flow oil and water naturally to the surface, or are pumped through an approximate two-inch inside diameter steel tubing to the surface. A pumping unit is set at the wellhead, and a pump with a barrel-length matching the pump stroke is installed downhole adjacent to the producing zone. The second pumping unit on several of the EPU locations was installed to lengthen the pump stroke and increase the daily liquid recovery rate in that well.

3.3 Surface Production Operations

The produced gas, oil, and water may be treated in a knockout vessel (Chilingar and Beeson, 1969). This equipment is often used to separate casing head gas from the liquid portion, to reduce the easily separable water from the liquid stream, and/or to remove produced sand or sediment which would plug flow lines. The oil and water is then emptied into a heater-treater, which separates the oil from the water. Salable oil is pumped through a pipe line, stored in a tank, and is sold to a crude oil transportation company.

The produced water usually flows through a pipeline and into a tank or brine pit, where it is accumulated prior to disposal (Chilingar and Beeson, 1969). According to Mr. Tom Richmond

of the BOGC (personal communication, December 23, 1998), unlined brine pits were allowed within the EPU boundary at one time. Modern salt water injection concepts suggest that minimum cost for salt water disposal is achieved by collecting the produced water directly into a tank and injecting it as soon as is possible after production. This minimizes the cost of adding corrosion and scale inhibitors and bactericide. A bactericide is often added to limit biological growth on the formation receiving the injected brine.

Corrosion continues to be a problem associated with oil production in the study area. This corrosion may be due to electrochemical causes, anaerobic bacteria, oxygen, or aerobic bacteria (Chilingar and Beeson, 1969). Well casings are protected using impressed current to counteract the corrosion tendencies. Flow lines and equipment are protected by adding corrosion inhibitors to control acid ion, react with oxygen, and coat the steel surfaces to eliminate hydroxide buildups. Corrosion inhibitors may be high in chromous ions (chromates).

Produced water may contain calcium and other soluble cations. Mineral solubilities vary greatly between reservoir and surface conditions. Murphy uses scale inhibitors at the well head north of the Poplar River to control calcium scale. The USGS has completed previous studies of produced water (Otten *et. al.*, 1997). Otten discovered that radioactive isotopes were present in produced water in Osage County, Oklahoma. Early disposal practices and later salt water spills led to elevated radioactivity in soils near at least two oil fields in Osage County.

3.4 Enhanced Recovery

Operators may recover additional crude oil using reservoir pressure maintenance (Chilingar and Beeson, 1969). Pressure is often maintained by reinjecting produced water, or by injecting natural gas or carbon dioxide gas. Murphy found that reservoir pressure maintenance was not practical in the EPU because the natural water drive of the reservoir allows some of the wells to produce by natural flow. Carbon dioxide and/or natural gas are not presently available in enough quantity at reasonable cost to use to either inject around the field perimeter to increase oil mobility (and thus increase oil recovery), or to inject as a gas cap to displace oil back to wells on the perimeter of the field.

4.0 EAST POPLAR UNIT FIELD INSPECTION

HTSI personnel inspected the EPU during November 1998. The data were recorded in a field log book. Photographs were collected for almost every location in the study area which is either currently active or appears temporarily abandoned. The locations of the reviewed sites and equipment were recorded on USGS 7.5-minute topographic maps covering the study area. The four maps are contained in Appendix A. They are: Map 1 - Geddart Lake; Map 2 - Long Creek East; Map 3 - Badger Creek; and Map 4 - Poplar Northeast. Appendix B contains a summary of the data recorded in the field log book. This data is organized into a spread-sheet format requiring facing pages. Copies of the actual photographs are presented in Appendix C. Entries in Appendices A, B, and C are tied together via photographic reference numbers, actual EPU well numbers, and Murphy facility numbers. The maps indicate the actual locations of wells and equipment. We present these data for review.

5.0 SUMMARY OF INSPECTION RESULTS

HTSI personnel were somewhat hampered by snow cover during the site inspections. However, we feel that the inspections have identified the major environmental issues pertinent to the operating history of the study area:

5.1 Well and Facility Status

HTSI found that approximately 118 wells were drilled within the EPU. We found that 25 of the 118 wells (21.2 percent) were plugged and abandoned (P&A). The surface at these sites was generally reclaimed and usually showed minimal indication of prior use as a producing well. Based on non-daily pumper visits and disabled electrical service, we assigned a temporarily abandoned (TA) status to 47 of the 118 study area wells (39.8 percent). We also observed that 46 of the 118 study area wells (39.0 percent) were being actively used to produce oil and gas or to dispose of produced saltwater.

We identified 19 lease batteries A through S in the EPU. We reviewed all of their locations except Batteries A, G, and O, which had apparently been reclaimed prior to our site visit. We identified and reviewed four active unit batteries, the North Central Battery (formerly Battery R), the South Central Battery (formerly Battery S), the Huber and McGowan Batteries. We identified and reviewed six salt water disposal stations (old 5D, new 5D, 1D, 6D, 80D, and 8D). We also reviewed three equipment yards and one custody transfer point. HTSI personnel visited 30 of the 33 locations, finding 33.3 percent (11/33) of the sites still active, 42.4 (14/33) percent were TA'd, and 24.3 percent (8/33) were dismantled and reclaimed to various degrees.

5.2 Transformers

HTSI visited approximately 148 locations/facilities during our site inspection. We found that 61 of these sites (41.2 percent) had transformers. Most of these transformers are still used for the power requirements of producing petroleum from the study area. However, there are transformers present on 12 TA'd locations.

5.3 Containment Dikes

HTSI personnel witnessed a spill at EPU-31 during our site inspections. This spill consisted of salt water and crude oil. Should the leak be discovered before significant quantities of produced liquids are spilled, and the spill contained to the bermed area, such spill is both limited in areal extent and easily cleaned up. Wells like EPU-101, which is southeast of the South Central Battery, have no berms at all. Many other wells had gaps in their berms. The purpose of the berms is to contain any well head spill to the location itself. Maintaining the berms requires continual effort by the operator. Enforcement requires vigilance by the regulating authorities.

5.4 Production Chemicals

Many of the inspected locations are equipped with approximate 150-gallon poly tanks. The primary chemical usage at the site appears to be corrosion inhibitor. These chemicals are

generally in either poly tanks on stands, or in 55-gallon drums on drum racks. Good site management uses these practices. HTSI personnel did not identify any apparent places where chemical spills have occurred within the study area. However, we did find a two-gallon plastic jug labeled Roundup (left of the base of the fulcrum beams) at well EPU-39 (Photo 2-16, Appendix C). This suggests that Murphy controls weeds at their wells and facilities using herbicides.

5.5 Crude Oil Spills

Crude oil spills were evident at almost every location which had not been reclaimed. Clay soils have a significant capacity to adsorb spilled crude. However, gravelly and/or sandy locations have poor crude oil adsorption capacities. Large volume spills on gravelly locations, coupled with shallow, near surface aquifers, may result in crude oil product floating on groundwater. Spill regulations are contained in 43 CFR 3162.5-1 and ARM 36.22.1103. We also noted that apparent success of surface reclamation efforts is usually evidenced by the lush grass growing right up to the wellhead at many reclaimed sites.

5.6 Stressed Vegetation

HTSI observed apparent stressed vegetation at 42 of the 148 inspected sites (28.4 percent). We observed three generations of flow lines near Battery P. The detrimental effects of corrosion on steel pipes and vessels in the study area have apparently resulted in significant salt water spills. Historically, one salt water injection well, a Mesa Petroleum well near the South Central Salt Water Disposal facility, developed a casing leak where the cement bond failed around the injection zone. Reportedly, this well flowed salt water freely to surface for three months while a relief well was drilled to control the "run-away" well. Thamke's results indicate abnormally high near surface electrical conductivity in the study area near this well and in many other areas due to elevated groundwater salinity. HTSI viewed stressed vegetation adjacent to many facilities which appear to correlate with both Thamke and recent study area salt water production and disposal facilities. We did not collect radioactivity measurements (Otten, 1997). In our opinion, the salt water problem constitutes the most difficult and pervasive problem we can identify through our inspections.

5.7 Waste Drums

HTSI personnel observed waste drums at five of the 148 sites we inspected. These drums, at EPU-101, EPU-114, EPU-110, North Central Battery, and E-Battery, were normally numbered and placed on palates. We also inspected EPU-46, which had palates with 9 numbered drums. The drums at EPU-101 and EPU-114 were not on palates. All drums except one at EPU-110 were tightly covered. The open drum at EPU-110 appeared to contain either waste oil or crude oil and expended oil filters. The open drum will collect precipitation, which will eventually displace the oil contained within the drum.

5.8 Junk

Many of the locations and facilities had junk scattered around the Murphy occupied surface area. Most TA'd wells had pumping units which have become the source of parts for other similar pumping units within the field boundary. The presence of the abandoned junk, steel vessels, and equipment may be construed or classified as solid waste. Rules for solid waste management are contained in 40 CFR Part 260 and ARM 17.50.500 et seq. We did not inspect the abandoned piping or equipment for scale deposits or perform a radioactivity survey. However, we do note that Otten *et. al.* (1997) found radioactivity associated with scale deposits in abandoned piping and oil field treatment and storage vessels.

5.9 Pits

We inspected eight pits within the EPU and one at EPU-46, which is outside the boundary. The pits at South Central Salt Water Disposal Station, EPU-80D, Salt Water Disposal Station 1D, and Salt Water Disposal Station 5D either have probable saltwater with total dissolved solids exceeding 15,000 ppm or crude oil. All these pits are lined and fenced. However, the pits at the South Central Salt Water Disposal and Salt Water Disposal Station 1D have no or partial netting. The regulations for operating pits are contained in ARM 36.22.1223 or regulatory orders from 43 CFR 3160 et seq. The pits at EPU-60 and EPU-23 have sludge in

the pit, but are either not lined, fenced, or netted. The pits at EPU-46 and east of EPU-19 are dry pits. There is also a poorly fenced pit containing water at the McGowan Battery which is neither lined or netted. Proper pit closure methods are generally determined using chemical analyses of pit contents.

6.0 DISCUSSION OF SOLUTIONS AND REMEDIATION METHODS

The operational shortcomings witnessed within the EPU require solutions. The environmental problems either witnessed or suspected may require potential remediation methods. The following is a discussion of the potential remediation methods for the items presented in the previous section.

6.1 Temporarily Abandoned Wells and Facilities

Rules pertaining to TA are contained in ARM 36.22.1303 or 43 CFR 3162.3-4. We labeled many wells and facilities as TA'd. These facilities appear of no further value to mineral extraction. The arguments for properly plugging and abandoning wells within one year include the minimization of salt water and/or crude oil movements from formation to formation, or ultimately escaping to the surface or into potable groundwater. HTSI personnel noted an apparent salt water leak at well EPU-69, in the north central portion of the field. This leak was occurring from the wellhead at this location with mostly sand and gravel surface material. Well EPU-69 is a TA'd well. The arguments for allowing longer TA periods include possible future mineral recovery using enhanced recovery methods. Some enhanced methods may not be economic today, but may be practical or available in the near future.

HTSI personnel observed that many of the old lettered batteries were obviously being dismantled, removed, and reclaimed during our inspections. The recent construction activities tend to obscure the effectiveness of inspections. A follow-up review of these facilities at some later date will confirm if Murphy has completed reclaiming these areas. In part, reclamation consists of hauling off equipment and debris, discing, and seeding with native grass.

6.2 Transformers

Most of the wells drilled within the unit boundary were completed during the 1950's and 1960's. Montana Dakota Utilities provided electrical hookups to power the operations in the EPU. Transformers installed during this period undoubtedly contain oils with poly-chlorinated biphenyls (PCBs) in concentrations exceeding 50 parts per million (ppm). Transformers removed when the site or location is dismantled and reclaimed are not of concern to the landowner. However, it is imperative that transformers are removed prior to lease termination.

The options for proper disposal include getting a qualified company to recycle the transformer and its contents. Transformer and contents could be shipped to a transfer, storage, and disposal (TSD) facility for storage, but the owner of record then continues to be liable for the PCB material from cradle to grave (until the PCB's are destroyed). A third option has qualified personnel remove the transformers from their poles, collect samples for chemical analysis (to characterize the contents), and ship this material to the most appropriate site to recycle or to burn the material for energy recovery at a licensed facility. The regulations pertaining to PCB disposal are contained in 40 CFR 761.20 and ARM 17.54.312.

6.3 Containment Dikes

In Montana, the rules and regulations pertaining to oil field operations originate from the Montana BOGC (ARM 36.22.101 et seq.) or the BLM (43 CFR 3160 et seq.). Containment dikes or berms were incorporated into the regulations in the 1980's. These regulations are generally enforceable by the Montana BOGC everywhere within Montana except on Tribal or Allotted tracts on designated Indian reservations. Enforcement authority on Tribal or Allotted tracts belongs to the BLM.

6.4 Chemicals

HTSI personnel did not find any apparent spills of production chemicals prior to their use within the study area. Chemical usage appears in accordance with sound management practices. Therefore, we do not comment on either operations or remediation options for oil field chemicals.

6.5 Crude Oil Spills

Spills of crude oil and produced water exceeding 50 barrels (42 gallons per barrel) require notification of either the BOGC or BLM. The operator must promptly control the spill and clean up the resulting spilled material. Impacted soil may be treated (ventilated) in place to reduce the benzene component of the crude oil which could render this material a toxic waste (40 CFR 261; ARM 17.54.331). The crude oil and salt water produced is generally exempt from the provisions of the Resource Conservation and Recovery Act (RCRA) where the oil extracted from the ground is placed into a transportation system with the intent to insert the crude into the petroleum refining process [40 CFR 261.4(a)12]. There is an argument for this exemption terminating for crude oil and saltwater where the crude oil cannot be inserted into a conveyance leading into the petroleum refining process.

A ten barrel release of crude oil and saltwater that collects into a water course obviously flowing into a surface water body or stream, or any release which imparts a sheen on the groundwater constitutes a release reportable to either the EPA or Montana Water Quality Division. BOGC rules governing safety, including spill reporting, are contained in ARM 36.22.1101-1105. The BLM follows rules in 43 CFR 3162.5-1.

Small amounts of crude oil stained soil could be treated in place by cultivating this soil several times per month from April through October. The discing and reseedling operations used to reclaim the plugged and abandoned well sites appears to be very successful. Larger crude oil spills may require berming to contain the spill and use of vacuum trucks to pick up the spilled crude oil. The recovered oil can then be routed through normal crude oil processing facilities,

used for dust suppression, or hauled to the nearest saltwater disposal well for disposal by injection. For losses of crude oil on the very gravelly locations adjacent to the Poplar River, it is possible to have crude oil reach the groundwater. If a measurable thickness of free oil is detected on the groundwater, this free oil would need to be recovered. The Montana Water Quality Division tends to follow the regulations pertaining to free product recovery as outlined under the Underground Storage Tank Program. Free product recovery requires that the operator define the extent and severity of the plume, install a recovery well(s), trench, or pit, and recover the product until the thickness of such product is less than 0.01 foot. Although HTSI personnel can not generally determine the presence of free product on the groundwater via a site inspection, we did observe oil on water in an underground valve housing at the North Central Battery. Via our inspection, we did not determine if the water represents the actual groundwater surface in the North Central Battery vicinity.

During August 1998, strong winds blew a heater treater over in the N Battery. Crude oil and salt water may have spilled at this facility. Such occurrence would allow produced liquids to spill until the pumper crew next checks the facility. If this occurs on a Friday evening, it potentially may continue until discovered on Monday morning. Berms may have limited the area impacted by this spill.

6.6 Stressed Vegetation

HTSI personnel noticed that at least three generations of crude and salt water flow lines were installed between EPU-37 and the P-Battery, located in the northern portion of the study area. The corrosive nature of the produced liquids is obviously the cause for many of the salt water spills at the site. The conversion of the flow lines at the site to the concrete asbestos pipe is an attempt by Murphy to both lower their ultimate operating costs and to minimize the number and severity of the salt water spills at the site.

This salt water raises soil salinity and ultimately decreases the productivity of the soil. A no action policy allows the natural precipitation to slowly leach the elevated salt content from the

soil. The no action method allows the salt to collect into either the runoff or the groundwater systems. Soil washing could be utilized to quickly strip excess salinity from the soil. However, this process uses large volumes of potable water to create large volumes of saline water requiring disposal. Murphy uses a process that amends the impacted soil with manure and straw. The increased organic content of the soil increases the salt bearing capacity of the soil. Although this does not reduce the elevated salinity, it does restore the soil's productive capacity to some extent while reducing the rate at which the salt is released into the surface and/or groundwater system.

A no action policy concerning the Poplar River and its saline contaminated aquifer allows the continuation of the existing conditions without applying any remediation efforts to alter the saline conditions. As a receptor-based remedy, extending Poplar's community water intake to a point near the study area's north boundary would improve Poplar's water supply (if impacted). However, the remedy to the surface owners' loss of shallow aquifer usage would require these owners to have access to the Poplar community water supply.

Reducing the salinity of the shallow aquifer within the study area requires the careful site characterization that is presented in the USGS Water Resources Investigations report (Thamke *et al.*, 1997). A well or field of wells is installed to withdraw high salinity water from the aquifer's saline plume. Disposal of the saline groundwater would require its injection in a permitted Class II injection well.

The high salinity of produced salt water suggests a high cation load in this water. We do not presently know the chemical composition of the produced water. We do know that scale inhibitors are used in a portion of the study area. Since Otten's studies (1997) suggest that radioactive isotopes may be present, the salt water spill impacted soil may have to be excavated and shipped to an acceptable disposal site. However, proper disposal is generally determined after obtaining data from chemical and radioactivity analysis of soil samples from the spill areas.

The HTSI study of the salt water problem is specifically meant to augment previous work done in the area (Thamke, 1997). Tribal representatives requested comments on the potential solutions for solving the operational problems and for site remediation.

6.7 Drum Waste Disposal

The contents of the drums within the study area must be known for disposal. One method for disposal brings in a licensed hazardous waste transporter, who opens the drums, pumps the contents into his tanks, and hauls the contents to a Class II injection well for disposal. This assumes that the contents are still within the definition for the oil and gas RCRA exemption (see Section 6.5). Otherwise, the drum owner must call in a licensed shipper, manifest the waste, and ship it to a TSD for storage, recovery, or incineration. Without adequate knowledge of what is actually in each drum, the contents would require sampling and laboratory analysis. Obviously, Murphy has more than 1,000 kilograms of waste in these drums, and this quantity of waste should be shipped within 90 days. Rules pertaining to shipping and manifesting hazardous wastes are contained in 40 CFR 264 and ARM 17.54.100 et seq.

6.8 Junk Disposal

Much of the steel within the study area could be salvaged and recycled. An active effort to inventory the pumping units and parts scattered through the study area could result in rebuilding several entire pumping units. The steel frameworks, available in excess, could be recycled. Barring radioactive scale, abandoned treaters and knockout equipment can be rebuilt and sold, or sold for scrap. Wood and other debris could be collected and hauled to an industrial landfill.

6.9 Pit Closure

Dry pits can be bull-dozed, leveled, and the surface reclaimed. Exxon Corporation closed salt water and oil containing pits in Belle Creek Field by solidification using fly ash. A slurry mixer worked in one corner of the pit mixing pit liquids actively with fly ash. Before the fly ash can fully hydrate, the mixture is pumped and placed into the farthest corners and edges of the open pit. Thus, fly ash mixture displaces the entire contents of the pit back to the slurry mixer until the pit has been closed. A synthetic liner is installed to cover the closed pit. The liner is covered by 12 to 18 inches of soil, which is then planted in native grasses. For Murphy to use this

method, they would need information pertaining to the full cation analysis of pit contents. Radioactive isotopes, if present, could render this closure method as inappropriate (Otten, 1997).

7.0 SUMMARY AND CONCLUSIONS

Based on our observations during our review of the study area, we offer the following:

1. The EPU has been operated as an oil field for more than 45 years. Its operating condition appears similar to other oil fields of similar size.
2. Approximately one fifth of the EPU wells are currently P&A'd. Another two fifths of the EPU wells are TA'd. Wells no longer serving the purposes of extracting oil and gas are TA'd and should be P&A'd within one year of when that well ceased being useful. Unless Murphy has plans for a secondary recovery effort in the EPU using the TA'd wells, those 47 wells should be P&A'd.
3. Transformers are being removed from the P&A'd sites with relative regularity. However, the Fort Peck Tribes should be aware that it is imperative that the transformers be removed by Murphy or MDU prior to lease termination.
4. Many locations have no or partial berms. Berms limit the lateral extent of spills where they occur within the locations or other facilities within the study area. Berms should be installed and maintained on all active locations.
5. Murphy is converting to concrete asbestos flow lines within the study area. Although this is an expensive remedy, the diminished future repair costs and the lesser number of flow line failure caused spills and their cleanup should provide an economic incentive to install the new flow lines. The judicious use of production chemicals and more frequent equipment inspections can also reduce the number and severity of failures in pumps, pipes, vessels, and injection wells.

6. General crude oil and salt water spills of 50 barrels require notification of the Montana BOGC or the BLM. A ten barrel spill where impinging on a dry watercourse, or a sheen imparted to surface water require notification of the Montana Water Quality Division or the EPA. Any spill requires prompt corrective action.
7. Murphy apparently is successful in reclaiming crude oil spills around P&A wells. This is especially true at the sand and gravel locations. However, sand and gravel locations have limited capacity to absorb crude oil from spills. This limitation could allow the spilled crude oil to accumulate on the groundwater for producing wells near the Poplar River. Any accumulation of crude oil on the groundwater requires recovery of the crude until its thickness on the groundwater is less than 0.01 foot.
8. Salt water contamination constitutes the most pervasive and difficult problem encountered during our site inspections, apparently existing in 28 percent of the reviewed sites. We assume that the addition of manure and straw will improve soil productivity in the near term. However, the salt from these spills apparently continues to leech and invade both the surface and groundwater systems in the study area. We did not look for radioactivity in either the soil or equipment we observed.
9. Murphy has six locations in the study area where split-ring waste drums are accumulated. The amount present could classify Murphy as a large quantity waste generator. Murphy should properly dispose of this material in accordance with the existing regulations.
10. Murphy should dispose the steel, wood, and plastic material present at many of the locations throughout the study area.
11. We observed four salt water injection unit emergency pits in the study area. Two of these pits have no net. The McGowan Battery pit is not fenced, not lined, and has no net. Of four other pits, two have sludge. Proper pit closure requires chemical and radioactivity analysis of soil and water samples. Murphy should close the unused pits.

8.0 RECOMMENDATIONS

Based on the preceding summary and conclusions, we recommend the following:

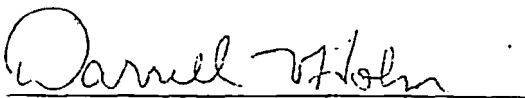
1. The Fort Peck Affiliated Tribes should press Murphy to P&A any wells one year after their TA status begins. The BLM and the Montana BOGC have jurisdiction over TA and P&A wells in the study area. As an alternative, you could request that Murphy disclose any plans for a secondary oil recovery effort within the EPU.
2. Tribal inspectors should diligently review the temporarily abandoned sites as they are permanently abandoned to ensure that Murphy or Montana Dakota Utilities removes transformers and other electrical equipment from these locations prior to lease termination.
3. Murphy should install and maintain berms on all active locations. The Montana BOGC and BLM should be encouraged to inspect the entire study area on a periodic basis to ensure compliance with the existing regulations. Tribal inspectors should review the operating locations and batteries within the study area to ensure that berms are in place to limit surface damages from any future crude oil and salt water spills.
4. We recommend that locations adjacent to the Poplar River, when P&A'd, are assessed for the presence of crude oil on the groundwater by a competent environmental professional.
5. Due to the frequent construction encountered within the study area involving equipment removal and reclamation, we recommend that the salt water stressed areas be reviewed during the spring of 1999. This review should also include soil and water sample collection and analysis to provide documentation of the severity of the salt impacted soil within the study area. The work should also include measuring radioactivity of scale in abandoned pipe and vessels and salt water spill areas.

6. The Fort Peck Affiliated Tribes should require that Murphy remove and properly dispose any split-ring drums on Tribal, Allotted, or Indian-owned lands as soon as possible.
7. Murphy should be required to close any unused pits in accordance with appropriate chemical and radioactivity data, and to fence, line, and net those pits currently in use.
8. Tribal inspectors should require Murphy to remove and reclaim or dispose the abandoned equipment on Tribal or Allotted tracts within the study area. The inspections should include requiring and ensuring disposal of wood, metal, and plastic debris on these tracts.

9.0 LIMITATIONS

HTSI completed this work in accordance with the generally accepted practices followed by other consulting firms conducting similar studies. HTSI observed that degree of care and skill generally exercised by other consultants working under similar conditions. HTSI's findings and conclusions must not be considered as scientific certainties, but as opinions based on our professional judgement and the data gathered during the course of this investigation. Other than this, no warranty is implied or intended.

Prepared and submitted by:



Darrell V. Holm, HTSI Project Engineer

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APPENDIX B

Field Log - Summary of Inspected Production Equipment and Locations

EAST POPLAR UNIT
PHOTO LOG
KEY TO ABBREVIATIONS

LEGEND:

WELL NO.

EPU	East Poplar Unit
G-Bat	Battery G
S. Cent.	South Central Battery
SWD-8D	Salt Water Disposal, 8D
SW6	Salt Water Station 6
N. Cent.	North Central Battery
xfer. stn.	Transfer station
SWD	Salt water disposal
WB-1	Wagner-Brough Well 1

WELL STATUS

P & A	Plugged & Abandoned
TA-bullplug	Temporarily abandoned
Abd	Abandoned
trans. stn.	Transfer station
SW	Salt water
disp.	Disposal
SWD	Salt water disposal
Veg.	Vegetation

TRANSFORMERS: SERVICE POLES

Not Rec.	Not recorded
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CHEMICALS

150gal.poly	150-gallon polyethylene
Corr. inhib.	Corrosion inhibitor
3 55gal met	3 55-gallon metal
2 55gal dr.	2 55-gallon drums

CRUDE SPILLS

Sludge betw.-	Sludge between
Lots w/in berm-	Lots within berm
Paved w/ oil-	Paved with oil
Some ol' stain-	Some oil stain
NW quad-loc.-	Northwest quadrant
	of location
(but v. muddy)-	(but very muddy)
S-PU & well-	South of pumping unit
	& well
5'rad.-sludge -	5 foot radius-sludge

WASTE DRUMS

1 w/ yel 5	1 with yellow #5
Blue 55gal	Blue 55-gallon

STRESSED VEGE.

Location w/o plant life
Location without plant life
E,SE off loc.- To E,SE off location
Sparse on loc.-Sparse on location

JUNK

Pipe,5gal	Pipe, 5-gallon can
Bldg junky	Building junky
Trash bbl	Trash barrel
Abd vessel	Abandoned vessel
Conc. asb.	Concrete asbestos pipe
Counterwts	Counterweights
PU & parts	Pumping unit & parts
PU on loc.	Pumping unit on location
Kitchen chr.	Kitchen chair
Serv. pole	Service pole
Pipe & fits	Pipe & fittings
100gal ves.	100-gallon vessel
Elec. serv.	Electric service
Rusted culv	-Rusted culvert

COMMENTS

eval.	evaluation
vege.	vegetation
loc.	location
re-eval.	re-evaluate
spr.	spring
KO	Knockout
SW	Salt water
environ.	environmental
rev.	review
TA	Temporarily abandoned
stn.	station
prog.	progress
chem. inj.	chemical injection
mkr.	marker
PU	Pumping unit
MDU	Montana Dakota Utilities
SW in GW	Salt water in groundwater
bkgd	background
P & A	Plugged & abandoned
fld.	field
add'n	addition
conc. asb.	concrete asbestos

WELL NO.	WELL STATUS	PHOTO NO.	DIRECTION	TRANSFORMERS	SERVICE POLE	CONTAIN. DIKE	CHEMICALS Size Type
EPU-20	Pumping	1-1	SE-NW	3	In use	No E berm	150gal poly Corr. inhib.
EPU-104	Flowing	1-2	SE-NW	3-Not in use	Disabled	None	None
EPU-17	P&A						
EPU-116	Pumping	1-3	S-N	3	In use	None	None
G-Bat	Battery	1-4	SSW-NNE			None	
EPU-76	P&A						
EPU-99	P&A						
EPU-44	P&A						
EPU-55	Flowing	1-5	SE-NW	3-Not in use	Disabled	Bermed	None
EPU-74	Uncertain						
EPU-26	P&A						
EPU-3G	P&A						
EPU-22	TA-bullplug	1-6	SE-NW	Not Rec.	Not Rec.	None	None
3at	Abd Tanks	1-7	SE-NW			None	None
	Abd Well	1-8	S-N			None	None
	Abd treater	1-9	NE-SW	Removed	Disabled	No E berm	None
EPU-32	TA-bullplug	1-10	SSW-NNE	Removed	Disabled	No S berm	None
EPU-101	Flowing	1-11	NE-SW	3	Disabled	None	None
EPU-9	Pumping	1-12	ENE-WSW	3	In use	No E berm	None
K-Bat	Abd treater	1-13	N-S	Removed	Disabled	Bermed	None
	New flowline	1-14	WNW-ESE				
EPU-100	Pumping	1-15	NE-SW	3	In use	No N berm	None
						GapNE,NW	
EPU-68	TA-bullplug	1-16	E-W	3	On ground	None	None
EPU-24	TA-bullplug	1-17	NW-SE	Removed	Removed	Not eval.	None
EPU-15	Pumping	1-18	E-W	3	In use	No E berm	150 gal polyCorr. inhib.
EPU-7	Pumping	1-19	SE-NW	3	In use	No NE berr	150 gal polyCorr. inhib.
				4th pole W		Weak @ NW	

MAP NO.	CRUDE SPILLS	STRESSED VEGE.	WASTE DRUMS	JUNK	COMMENTS
4	Well head	Not observed			Lots of snow limited evaluation
4	Flow line	Not observed			Spill north of well head
4					Site reclaimed
4	Well head	Not observed			Propane pup at well head
4		Not observed	Pipe		Replacement well for 17
4					Site reclaimed
4					Site reclaimed
4					Site reclaimed
4	In & on berm				Recompleted as gas well
4					On fee land - no road- did not review
4					Site reclaimed
4					Did not locate marker
4	Not observed	Not observed			Lush grass up to well
4	Sludge betw.	None at tanks	Cable		Tanks rusted out - sell for scrap
4	Not observed	Not observed			Concrete pad in place - no lease ID
4	Not observed	Not observed			Fire tube plate gone - sell for scrap
4	Snow limited	E of well head			Scavenged pumping unit
4	S,SE,W of wel	No veg to W	1 w/ yel 5	Pipe,5-gal	Crude flowed W of location, no berm
4	Well head	Not observed			Access E of well; no or weak E berm
4	Treater,W-line	Not observed		Bldg junky	Unit abandoned for central crude processing
4	Well head	Wellhead		Gear oil jug	Snow limited evaluation, but vege-
			Trash bbl		tation is sparce.
4	Not observed	Not observed			Concrete pad and railing intact
4	Snow limited	Not observed			Farmer reclaimed up to wellhead.
4	Well head	Wellhead			Snow limited eval., vege. is sparce.
4	Lots w/in berm	Not observed			Scavenged pumping unit on loc'n.

WELL NO.	WELL STATUS	PHOTO NO.	DIRECTION	TRANSFORMERS	SERVICE POLE	CONTAIN. DIKE	CHEMICALS Size Type
EPU110 P & A							
EPU-6	Flowing	1-20	N-S	3	Disabled	No N berm	None
S Cent. (R-Bat.)	battery	1-21	NE-SW	3	In use	Bermed	None
	trans. stn.	1-22	N-S				None
	tanks	1-23	WNW-ESE				None
	SW pit	1-24	ENE-WSW			Bermed	None
EPU-12	Pumping	1-25	SE-NW	3	In use	No E berm	150 gal polyCorr. inhib.
SWD-8D		1-26	SE-NW	3	In use	No N berm	500 gal polyCorr. inhib.
		1-27	E-W				55 gal steel Scale inhib. Various
Pumper's shed storage		2-1	SE-NW				6 barrels Various On rack
EPU-8D	SW disp.					No berm	
Huber 5	TA-bullplug	2-2	ENE-WSW				
Huber	oil spill	2-3	NE-SW				
battery	treaters	2-4	SW-NE	3	Disabled	No W berm	
	salt stress	2-5	SW-NE				
	trans.stn. tanks	2-6	SSW-NNE				
Huber 4	TA-valve	2-7	N-S				
Huber4A	Pumping	2-8	NW-SE	3	In use	GapWberm	55gal steel Corr. inhib.
Huber 2	TA	2-9	N-S	Removed	Disabled	None	None
Huber 6	SWD	2-10	W-E	Removed	Removed	None	None
EPU-67 P & A							
EPU-11 P & A							
Huber 3	TA-bullplug	2-11	N-S	Removed	Removed	Partial	None
Huber 1	Pump on timer - TA?	2-12	SE-NW	3	In use?	No E berm	55gal drum Corr. inhib. on cradle
EPU-14	TA-bullplug	2-13	N-S	Removed	Removed	None	None
F-bat	backhoe pit	2-14	SE-NW			None	None
	treater, tank trans. pump	2-15	S-N	Removed	Removed	None	None

MAP NO.	CRUDE SPILLS	STRESSED VEGE.	WASTE DRUMS	JUNK	COMMENTS
4					Recently reclaimed; re-eval. spr. 99
4	Messy well	Not observed			Recent new flow line W to battery
4	Paved w/ oil Sludge@tanks			Flow line	Water KO and treater-new install Not much mess yet Sludge and oil around valves Water in pit; lined, fenced, no net
4	Inside berm	N, NE of berm		60' Casing	Possible SW stressing outside berm
4	Not observed	S of berms		Skid vessel	Site is junky - lots of chemicals in
4	Not observed			Frac tank	barrels on racks. EPU-8 is just
				Flow line	north of buildings. Need spr.99 rev.
4	Not observed	Not observed		N of bldg.	Junky, but all in one small area
4	Not observed	S of area			Probable extreme environ. impact
4	In&SW of berm Lots o' sludge Snow limits	S, SW of berm E, SE of berm		Pipe&fitting Wire&cable	Probable TA well - crude spill thru S berm, SW cor.-S treater rusted. out - sell for scrap. Stressed soil outside bermed area. Transfer str and 2 tanks in use? W tanks open, rusted out-sell for scrap. Spr99rev
4					Pad, partial railing; needs reclaiming
4	E of wellhead				Lots of oil; may go over E berm
4	W of wellhead				Lots of old oil on this location
4	S of wellhead	All of location		Abd vessel 5gai bucket	Probable high risk area Needs spring 99 review
3					In cultivated field - no marker
4					Reclamation in prog.; review spr. 99
4	Snow limits	Sparse			Farmer is reclaiming location, berms
4	E&W wellhead Onto road to E	Sparce @ wellhead			Messiest location thus far
4	Not observed	Lush grass		1.25" cable	Lush grass near well head
4	Probable To NW in valve Snow limits	Probable Unsure		Conc.-asb. pipe	Pipe being replaced, site reclaimed. Sludge around tank-too much snow activity to fully evaluate; spr 99 rev

WELL NO.	WELL STATUS	PHOTO NO.	DIREC-TION	TRANS-FORMERS	SERVICE POLE	CONTAIN. DIKE	CHEMICALS Size Type
EPU-39	Pumping	2-16	SE-NW	3	In use	No S berm	150gal poly Corr. inhib. 2gal plastic Roundup
EPU80D	Pit	2-17	N-S			Full berm	None
	Wood tank	2-18	ESE-WNW			W&SW berm	
	Stress Veg.	2-19	ESE-WNW			No NW berm	
	SWD	2-20	SW-NE	3	In use	E&N berm	300gal poly Corr. Inhib.
EPU-41	TA-bullplug	2-21	WSW-ENE	Removed	Disabled	None	None
EPU-45	TA-bullplug	2-22	SW-NE	Removed	Removed	None	None
EPU-5	Pumping	2-23	SE-NW	3	In use	Weak to E	150gal poly Corr. inhib.
C-Bat	treater pump tanks	2-24	SE-NW	3	Disabled	Bermed	None
		2-25	SSE-NNW				
Repairs		2-26	ESE-WNW				
EPU-85	TA?	2-27	E-W	3	In use?	Weak to E	None
EPU-18	Pumping	3-1	SE-NW	3	In use	None E, N	None
EPU-1	Flowing	3-2	SW-NE	3	Panel open In use?	Bermed	None
EPU-16	TA?	3-3	NE-SW	1	Disabled	No N berm	None
EPU-4	TA-valved	3-4	SE-NW	3	In use?	Bermed	None
EPU-3	TA-bullplug	3-5	N-S	Removed	Removed	None	None
EPU-88	Pumping	3-6	ENE-WSW	3	In use	No S berm	None
EPU-43	TA-bullplug	3-7	E-W	Removed	Removed	None	None
EPU-66	Pumping	3-8	SE-NW	3	In use	No SE, NW berms	150gal poly Corr. Inhib. 150gal metal dispenser

MAP NO.	CRUDE SPILLS	STRESSED VEGE.	WASTE DRUMS	JUNK	COMMENTS
4	Widespread	Sparse		Pump unit parts	Oil on standing water - NW berm. Extra pumping unit-very scavenged.
3	Not observed	E & SW In&out of berm Not observed		1.25" cable cardboard	Pit lined and netted. Wood tank in use. Stressed soil N of berm, but especially to SW near coulee. High risk area for saltwater. Rev. spr. 99.
3	Snow limits	Sparce veg.		Pumping unit parts	Gravel may not support vegetation.
3	E of wellhead Snow limits	Not observed		Cable	Well is west of old Model A
4	Wellhead & N Snow limits	Not observed		Culvert	Snow limited evaluation of bermed Counterwts. area S of well.
4	Treater & W Around pump Sludge @ tanx	Not apparent		Pipe&valve Pipe - dike	This site should be reclaimed in spr. 99; should be re-evaluated then.
4					From C-bat, view of line break repair. Should review in spring 99.
4	S, N, SW-well	Sparse			Power shut off, no chems, status ?
4	Snow limits Wellhead	Not observed		PU & parts Gear oil jugs	Too much snow to fully evaluate
4	SW wellhead Snow limits	NW berm area		Pump unit Pipe&fitting	Lot of crude, too much snow to eval. Should review spring 99
4	W of wellhead Sludge NW,SE	Not observed		Tubing PU on loc. Frac tank Pipe&fitting	Tubing laid down, no rods. Beam pump disassembled, on ground. Flow line laid W recently. I should review status in spring 99.
4	W of wellhead On N berm	Not observed		Pump unit	Status is a ?, should review spr. 99.
4	E&Wwellhead	Not observed		Cable	Site may be in reclamation.
4	Wellhead	Not observed		Gear oil jug:	Some facility removed 50' E of well. Review reclamation efforts spr. 99.
4	Not observed	Not observed			Pad & well in new broken sod field.
4	E&Wwellhead	Not observed			Mud obscuring soil stain - becomes similar in color to crude spills.

WELL NO.	WELL STATUS	PHOTO NO.	DIRECTION	TRANSFORMERS	SERVICE POLE	CONTAIN. DIKE	CHEMICALS Size Type	
Q-bat	treater	3-9	NW-SE	Removed	Disabled	Bermed	None	
EPU-89	TA-bullplug	3-10	W-E	Removed	Removed	None	None	
EPU-64	P & A							
EPU-83	Pumping	3-11	SE-NW	3	In use	No S berm	2-55gal	Corr. inhib.
EPU-51	P & A							
EPU-57	TA-bent rod	3-12	SW-NE	3	Panel open	No N berm	None	
EPU-114	Awaits pipe	3-13	NW-SE	3	In use	None	None	
EPU-42	Flowing	3-14	SW-NE	3	In use	N,W berm	55gal drum	Scale inhib.
N-Bat	Tanks	3-15	ESE-WNW	3	Disabled	N, W, S	None	
	Trans pump							
	Treater	3-16	SE-NW			None	None	
B-Bat	treater	3-17	NE-SW			None	None	
SW-6	tanks	3-18	E-W	Removed	Removed	W,N berm	None	
	salt spill	3-19	SE-NW					
U-86	P & A							
EPU-29	P & A							
EPU-81	TA-bullplug	3-20	W-E	Removed	Removed	None	None	
EPU-62	TA-shut in	3-21	E-W	3,3rd pole	Disabled	SW,W,NW	None	
EPU-28	P & A							
EPU-103	TA-bullplug	3-22	E-W	Removed	Removed	None	None	
EPU-47	TA-valve	3-23	E-W	Removed	Disabled	None	None	
EPU-79	TA-bullplug	3-24	NE-SW	Removed	Removed	None	None	
EPU-25	P & A							
EPU-97	Pumping	3-25	SE-NW	3	In use	No E berm	None	
EPU-96	TA rods	3-26	WSW-ENE	3	Disabled	Gap to E	None	
EPU-110	Pumping	3-27	NE-SW	3	In use	None	None	

MAP NO.	CRUDE SPILLS	STRESSED VEGE.	WASTE DRUMS	JUNK	COMMENTS
4	N of treater	Not observed		5gal bucket	Facilities abandoned - should be re-claimed. Should review in spr. 99.
4	Not observed	Not observed			Pad & well in new broken sod field.
4		Lush grass			Site reclaimed
4	Paved w/ oil	Not observed			Workover rig on location..
4					Site reclaimed.
4	E,W,N - well	Not observed		Pump unit	
4	Wellhead	Not observed	Blue 55gal	Pipe&valve	Awaits flow line to begin production.
4	Wellhead	Not observed			Flowing well with electric chem. inj.
4	Around tanks	Construction			Treater blew over; 114 is down & 42 is repiped. Area being dismantled; should review this spring 99.
4	Around pump	Construction			
4	Around treater	Construction			
4	Around treater	Location		5gal cans-6	Treater shack very oily, trashy. Two tanks full of sludge. Strong evidence of salt stress to W, NW- rev. spr. 99
4		Location	Tank sludge		
4					Site reclaimed, no mkr.- plowed field
4					Site reclaimed.
4	Not observed	Not observed			Lush grass up to wellhead.
1	W wellhead	Not observed			Oil on SW berm; loss direct to river.
4					Surface cultivated & reseeded.
4	Not observed	20' radius-well			Pad remains; needs reclamation.
4	Some ol' stain	Not observed			Pad, railings, & tie downs remain.
4	Some ol' stain	15' radius-well			Pad, railings, & tie downs remain.
4					Site reclaimed.
4	Loc. & N berm	Not observed			Location is fairly gravelly.
4	Wellhead	No plants		Belt&guard Pump unit	Scavenged PU; gravelly location; saltwater leak from wellhead.
4	Location	Location	3-yellow #7		Gravelly, very messy location.

WELL NO.	WELL STATUS	PHOTO NO.	DIRECTION	TRANSFORMERS	SERVICE POLE	CONTAIN. DIKE	CHEMICALS Size Type
J-Bat	abandoned	4-1	S-N	3,3rd pole	Disabled	Gone	None
EPU-21	Flowing	4-2	W-E	2	Leaning	None	None
EPU-60	tank, pit	4-3	W-E			Pit bermed	None
	TA-bullplug	4-4	SW-NE	Removed	Disabled	None	None
EPU-106	TA-rods	4-5	W-E	3	Disabled	No W berm Gap NE cor.	None
EPU-31	Oil spill	4-6	NW-SE			No N berm	Corr. inhib.
	Pumping	4-7	NW-SE	3	In use	No N berm	3 55gal met Scale inhib.
N. Cent. Battery (S-Bat)	drums & junk	4-8	SSW-NNE	3	In use	No S berm	55gal drum Corr. inhib.
	old battery	4-9	ESE-WSW				
	new tanks	4-10	SE-NW			Bermed	
Custody transfer str.	receiving shipping	4-11	E-W		In use	None Sump.	None None
N SWD	pit	4-12	S-N			Bermed	
	tanks	4-13	SE-NW	6	In use	Bermed	300gal poly Corr. inhib.
EPU-1D	SWD					Bermed	
EPU-78	TA-bullplug	4-14	N-S	Removed	Removed	None	None
EPU-36	TA-bullplug	4-15	NE-SW	Removed	Removed	None	None
EPU-69	TA-bullplug	4-16	NE-SW	Removed	Disabled	None	None
EPU-59	P & A						
EPU-115	P & A						
EPU-102	Flowing	4-17	S-N				
E-Bat	treater tank	4-18	SSW-NNE	3	Disabled	Bermed	None
		4-19	SW-NE			No E, S berm	
EPU-70	Pumping	4-20	SW-NE	3	In use	No W berm	None
J-77	Pumping	4-21	SW-NE	3	In use	No W berm Gap NW	None

MAP NO.	CRUDE SPILLS	STRESSED VEGE.	WASTE: DRUMS	JUNK	COMMENTS
4	Valve header	Not observed			Site being reclaimed; rev. spr. 99.
4	N,E,S of well	Not observed			Pad, partial railing, pole, well remain
4	Sludge, pit Frac tank leak W,E wellhead	Not observed Not observed		Flow line - 6 Gear oil jug Pump unit Pump parts	Workover pit with sludge in S part. Frac tank, laid over, has leaked. Pumping unit scavenged; MDU service pole leaning.
3	NW, SE, well	Not observed		Valve box 4x20' pipe Equipment Pump unit	Location is very oily, messy. Pipe & equipment laying around. Location should be reclaimed.
3	Oil on water. Wellhead	Probable Probable		Vacuum line	Site of recent pipeline break. Location should be cleaned up.
3	NW quad-loc.	Location w/o plant life	28 drums	Junk pile Old equip.	Stored outside on pallets-numbered! New treater; oil on water in valve sub Old battery; very messy; being recl. New tanks; good installation. Site probably has oil & SW in GW.
3	A little oil Oily at load pt.	Not observed Little grass		Kitchen chr.	Receiving side seems nearly clean. Shipping side has lots of oil spilled.
3	Oily mess-pit Not observed Not observed	N,E of pit No plants No plants			Pit lined, partially netted, very oily. Probable major area of SW impact N of tanks. Should review spr. 99.
4	E wellhead	Not observed			Pad, partial railing & well remain.
4	NE wellhead	Not observed			Pad, railing, well, monitor well(bkgd.)
3	S wellhead	Not observed		Valve box	Pump parts on ground; need to recl.
3					Found marker; site reclaimed.
3		150' radius well			Site reclaimed, but no life near well.
3	Not observed	Not observed		20' pipe	Lush grass near wellhead.
3	N end berm		5 drums - #6 Sludge	Lots o steel	Messy location; being reclaimed. Tank full of sludge; pump & salvage
3	Not observed	Outside berm to S, SSE		Serv. pole Trash bbl.	Cattle tracks obscure any oil stain. Major SW problem to S and SSE.
3	Probable	S of berm		Valve box Sucker rods	Cattle tracks obscure any oil stain. Probable SW problem to S of berm.

WELL NO.	WELL STATUS	PHOTO NO.	DIRECTION	TRANS-FORMERS	SERVICE POLE	CONTAIN. DIKE	CHEMICALS Size Type	
EPU-46	TA-bullplug equipment reserve pit	4-22	E-W	Removed	Removed	None	None	
		4-23	SSE-NNW					
		4-24	NW-SE					
EPU-10	Pumping	4-25	E-W	3	In use	E, N, NW Gap to NE	2 55gal dr.	Corr.&scale
EPU-23	Flowing TA-valve reserve pit	4-26	SE-NW	Removed	Removed	None	None	
EPU-112	Pumping	4-27	NE-SW	3	In use	No E, W, S	None	
EPU-56	Pumping	5-1	ENE-WSW	3	In use	No E berm Gap to N	150gal poly	Corr. inhib.
EPU-105	Pumping	5-2	W-E	3	In use	Part W berm Gap to NE	None	
Salt prob N of 105								
SWD-5D	pit extra berm pretreat battery	5-3	SW-NE					
		5-4	SW-NE					
		5-5	NW-SE	3	In use	Weak to W	Probable	Corr.&scale
EPU-107	Pumping	5-6	WSW-ENE	3	In use	Bermed Gap to E	None	
I- Bat	SW stress battery tank	5-7	W-E					
		5-8	SE-NW	Removed?	Removed?	No berms No N berm	None	
EPU-19 EPU-4G	TA-bullplug	5-9	SE-NW	Removed	Disabled	N,NW berm	None	
SWD	equipment pit	5-10	SSW-NNE	3	In use	None-bldg Berm-pit	3-55gal met	Corr.&scale Various
EPU-109	P & A							
EPU-92	P & A							

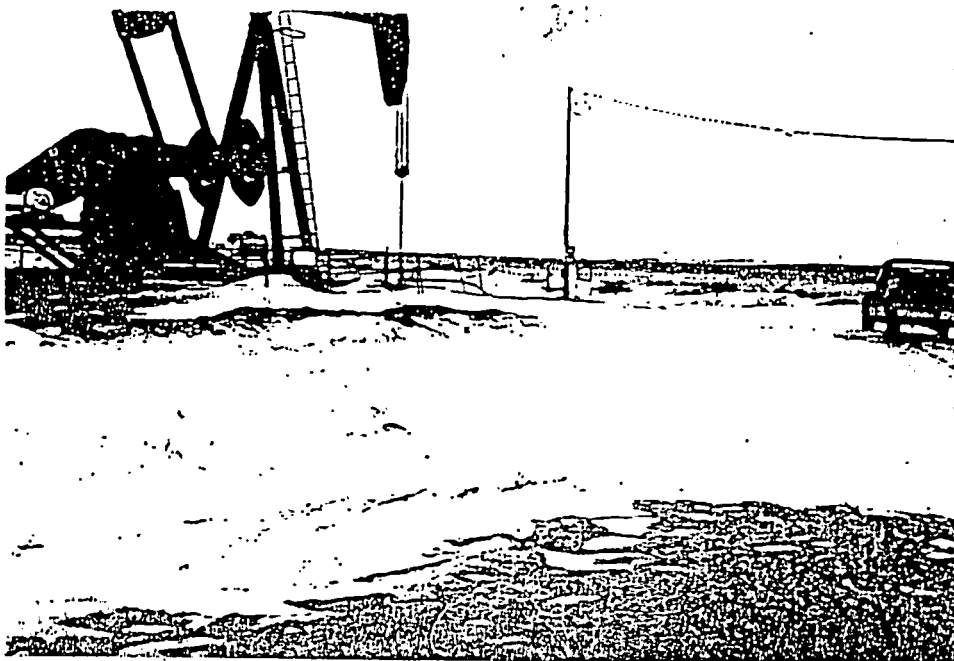
MAP NO.	CRUDE SPILLS	STRESSED VEGE.	WASTE DRUMS	JUNK	COMMENTS
3	E of wellhead	E of wellhead	2 tanks 4 treaters		Outside of unit, but has well to P&A and equipment to sell for scrap. Reserve pit breached; stressed soil.
		S of pit	9 drums (6-#1, 3-#2)		
3	Well & E of PU				Workover unit onsite; rods & tubing are in the workover rack.
3	Well, frac tank	Not observed	Frac tank		Appears to be a twinned well. Probable shallow gas well. Reserve pit open with sludge; needs P & A.
	Along flow line				
	Sludge in pit				
3	Wellhead	Unsure	Pipe, fittings		Flow line recently installed; site under construction; review spr. 99.
			Valve box		
3	Wellhead	Not observed	280' tubing		Very muddy; a lot of bermed area is under water.
	Under water				
3	A bit of oil	Not observed			This well is pretty decent.
3					Salt stress from Sec 19 bat crosses road, appears E of road near field.
3	Walls of pit	E, SE of pit			Lined, netted, & messy pit.
	Oil inside berm				Extra berm to protect from pit losses
		Farmed?	Pipe & fits		Pre-processing tank is 500' E.
			Lumber		Site under construction; needs spr. 99 review. Major SW problem.
			Vessel		
2	E of wellhead	Not observed			Site needs run-on, run-off control.
	Lots of gear oil				
3	Not observed	E, SE off loc.	Equipment		Area appears to be amended with straw & manure-in reclamation.
	Sludge	(3rd prior entry)	Rusted tank		Battery & tank abandoned; seem to be targeted for dismantling.
			Building		Site of major SW problem-rev. again
3	Not observed	Wellhead & E	100gal ves.		Either twinned, recompleted, or
	(but v. muddy)		treater		renamed. Obviously abandoned.
			tubing		Should be dismantled, reclaimed.
3	Not observed	Area, E & SE			Building & equipment not bermed.
					Pit not lined or netted; on gravel hill.
					Major SW problem; review spr. 99.
3					Site reclaimed.
3					Site reclaimed fall 98.

WELL NO.	WELL STATUS	PHOTO NO.	DIRECTION	TRANS-FORMERS	SERVICE POLE	CONTAIN. DIKE	CHEMICALS Size Type
EPU-27	Pumping	5-11	SE-NW	3	In use	S berm	None
EPU-93	TA-bullplug	5-12	N-S	Removed	Removed	None	None
EPU-33	P & A						
EPU-84	Pumping	5-13	SW-NE	3	In use	Bermed	None
EPU-91	TA-rods	5-14	SW-NE	Removed	Disabled panel open	No W berm	None
EPU-34	TA-bullplug	5-15	W-E	Removed	Disabled	None	None
EPU-49	P & A						
EPU-R1	P & A						
EPU-53	P & A						
EPU-38	Pumping	misfire	NW-SE	3	In use	None S, W	None?
M-Bat		6-1	SE-NW				
EPU-90	Pumping?	6-2	E-W	3	In use	No E berm	None
EPU-98	TA-bullplug	6-3	SSE-NNW	Removed	Removed	Weak to E	None
WB-1	P & A						
EPU-40	TA-valve	6-4	S-N	Removed	Removed	None	None
Smith #1	TA-valve	6-5	ENE-WSW	Removed	Removed	None	None
North Yards	storage	6-5	ENE-WSW	Removed	Removed		
EPU-30	TA-valve	6-6	SW-NE	Removed	Removed	None	None
EPU-58	TA-rods	6-7	SW-NE	3	Disabled	No N berm Gap to NE	None

MAP NO.	CRUDE SPILLS	STRESSED VEGE.	WASTE DRUMS	JUNK	COMMENTS
2	S-PU & well	Flow line to S Sparse on loc.			Lots of scale on wellhead. Very little plant life along flow line.
2	Not observed	Not observed			Pad, rail, well, & deadmen remain.
2					Reclaimed, no marker. In wheat fld.
1	E wellhead	Not observed.			Very muddy access to this location.
1	Wellhead	E,W wellhead		Pump unit	Location abandoned; should be reclaimed.
1	Not observed	Not observed			Site needs abandonment & reclaim.
1					Site reclaimed, no marker, in field.
1					Site reclaimed, no marker, in field.
1				Rods to N	Site is reclaimed; found marker.
1	S, N of well N of berm	N of wellhead N, NW - berm			Well is pretty messy. Probably is a major SW problem.
1					Site is reclaimed, but doesn't have much plant growth today.
1	Lots in berms	Not observed			Well is on timer, or is natural flowing
1	Not observed	N, S wellhead N,S of berm		Elec. serv.	Well is pretty messy. Probably is a minor SW problem.
1					Site is in wheat field; is reclaimed.
1	Not observed	Lush grass		Bridles, rods	Site needs reclaiming.
1	5' rad.-sludge	Stunted- 150'S			Site needs reclaiming.
1				New pipe Used pipe Rusted culv Bldg. fell	Site is junky; abd. treater, vessel, pile of rusted culvert. West add'n. of block building collapsed. Site stores new, used conc. asb. pipe.
1	Not observed	Not observed Lush grass to wellhead		Manifold Bent rods Railing	Well should be P' & A'd and the site reclaimed.
1	E,W wellhead	Inside berm E of berm		Fibreglass Metal Elec. panel	Site is abandoned, but is probably impacted by SW loss. Should be reviewed in spring 99.

WELL NO.	WELL STATUS	PHOTO NO.	DIRECTION	TRANSFORMERS	SERVICE POLE	CONTAIN. DIKE	CHEMICALS Size	Type
L-Bat	battery tank	6-8	N-S	Removed	Disabled	Removed	None	
EPU-73	Pumping	6-9	WNW-ESE	3	In use	None E, W Gap to S	None	
EPU-94	TA-rods	6-10	ENE-WSW	Removed	Disabled	None	None	
EPU-65U	P & A							
EPU-65	TA-bullplug	6-11	WSW-ENE	Removed	Removed	No W berm Gap N berm	None	
EPU-48	TA-valve	6-12	WSW-ENE	Removed	Removed	None	None	
EPU-37	TA-bullplug	6-13	NW-SE	Removed	Removed	None	None	
P-Bat	abandoned							
EPU-75	P & A							
EPU-54	TA-rods			Removed	Disabled	No W berm	None	
EPU-71	TA-bullplug	6-14	S-N	Removed	Removed			
EPU-111	Pumping	6-15	S-N	3	In use	Bermed Gap to SE	None	
EPU-95	TA-rods			3	In use?	None to SE	None	
Repairs								
Metal building Workover pit							500gal poly Corr. inhib.	
McGowan battery tank						W,S berm W,S berm		

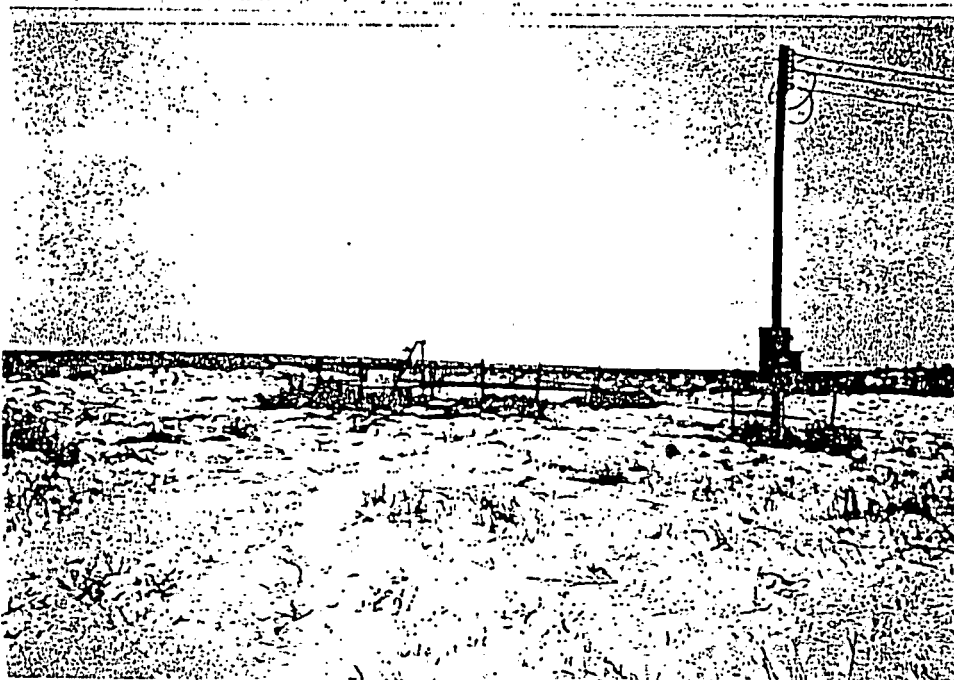
MAP NO.	CRUDE SPILLS	STRESSED VEGE.	WASTE DRUMS	JUNK	COMMENTS
2	Around treater Inside berm Around tank? S along flow line				Site is partly dismantled. Tank? is gone, but treater remains. Review spring 99 for SW damage.
2	S of wellhead Not observed				Needs berming.
2	Wellhead	Service pole E, W wellhead		Pump unit Valve box	Site is not tidy. Signs of SW spill. Needs to be abandoned, reclaim.
2					Found pit & pad, no marker.
2	N, E, SE - well	Wellhead SSE of berm		Cable	Site shows signs of salt water spill. Reclaim & review, spring 99.
2	E, W, SW - well	Wellhead			Abandon & reclaim.
2	N&W - well	Not apparent			Abandon & reclaim.
2					Lots of stressed plants along piping. May have caused major erosion.
2					Site reclaimed; in pasture.
2	Wellhead	Location		Belts, guard	Abandon & reclaim.
2					Pad & railing remain; site reclaimed.
2	Well, 15' radius			Rod Couplers	Fairly recent well; lots of equipment 1/2 mile to W. May want to look W
2	E, W wellhead	Not observed		Pump parts Frac tank	Recently TA'd. If production not restored, abandon site & reclaim.
2	Frac tank valve				Recent break repaired 1/3 of way from 95 to 111.
2					East of EPU-95. South of EPU-95; no liner or net, not secured; gravelly, has water.
2	KO & 40' to W Oil on water-S Pipe connects				Knockout area is messy. Berms are in place on low sides. Reinspect site in spring 99.



EPU-20

1-1
SE-NW

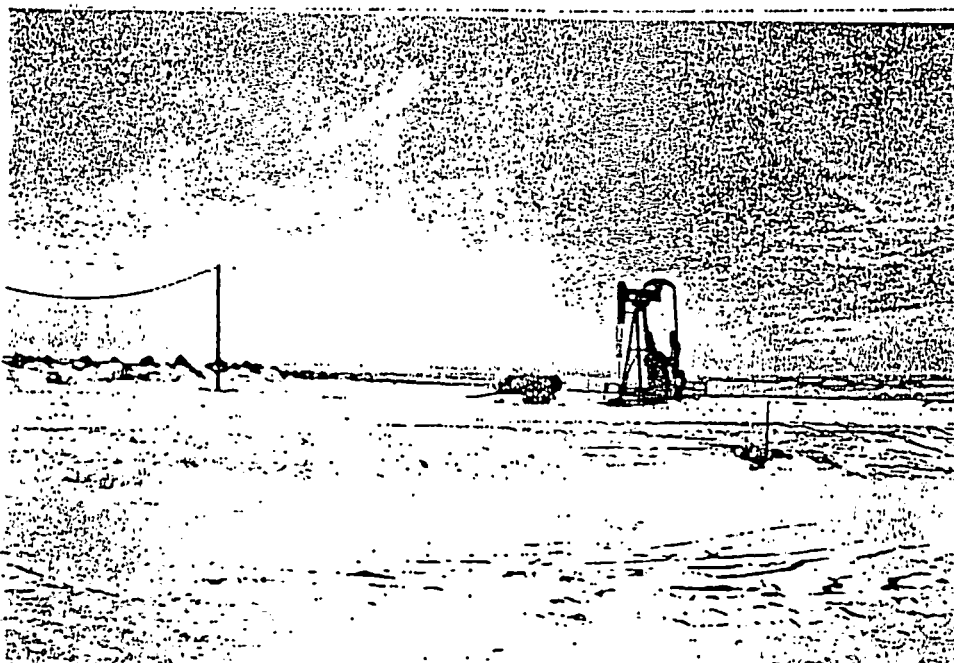
Poplar
(4)



EPU-104

1-2
SE-NW

Poplar
(4)



MURPHY 10398

EPU-116

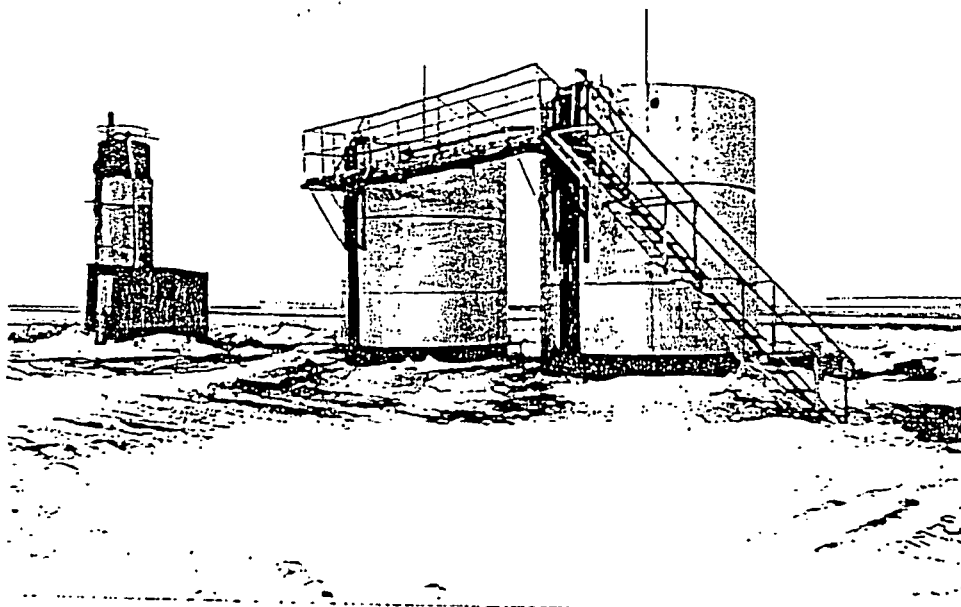
1-3
S-N

Poplar
(4)

EPU-116
Battery

1-4
SSW-NNE

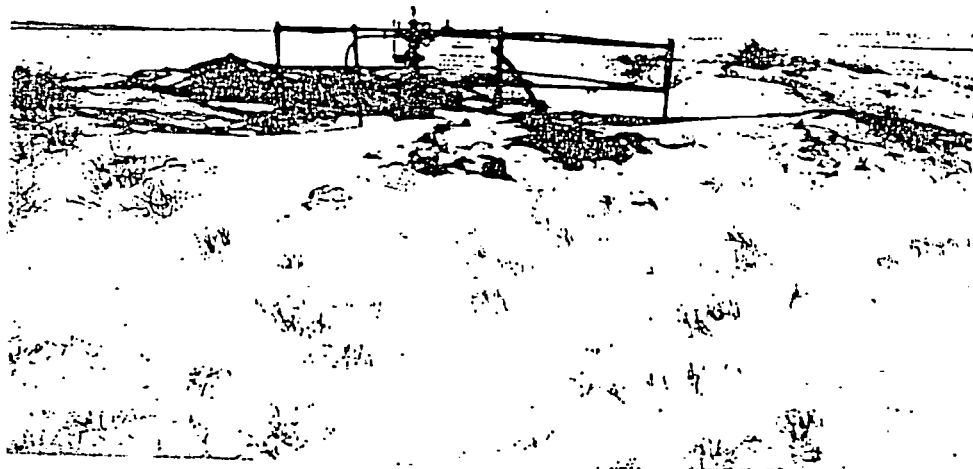
Poplar
(4)



EPU-55

1-5
SE-NW

Poplar
(4)

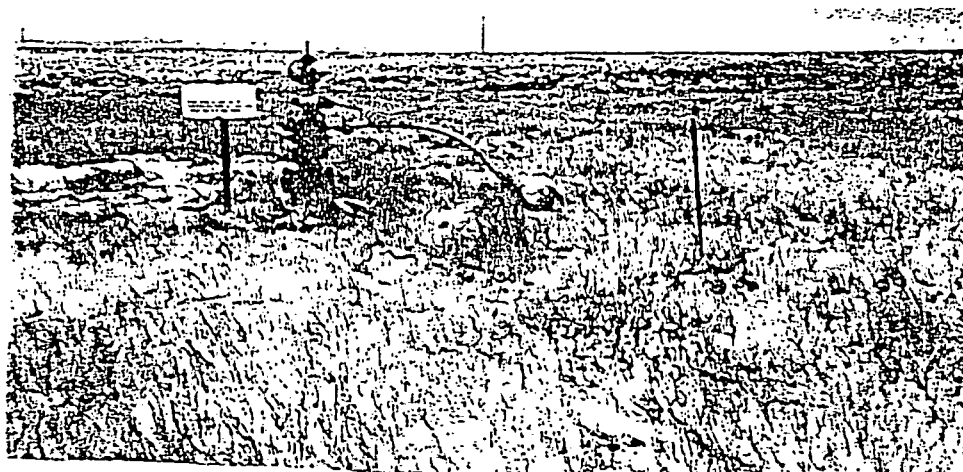


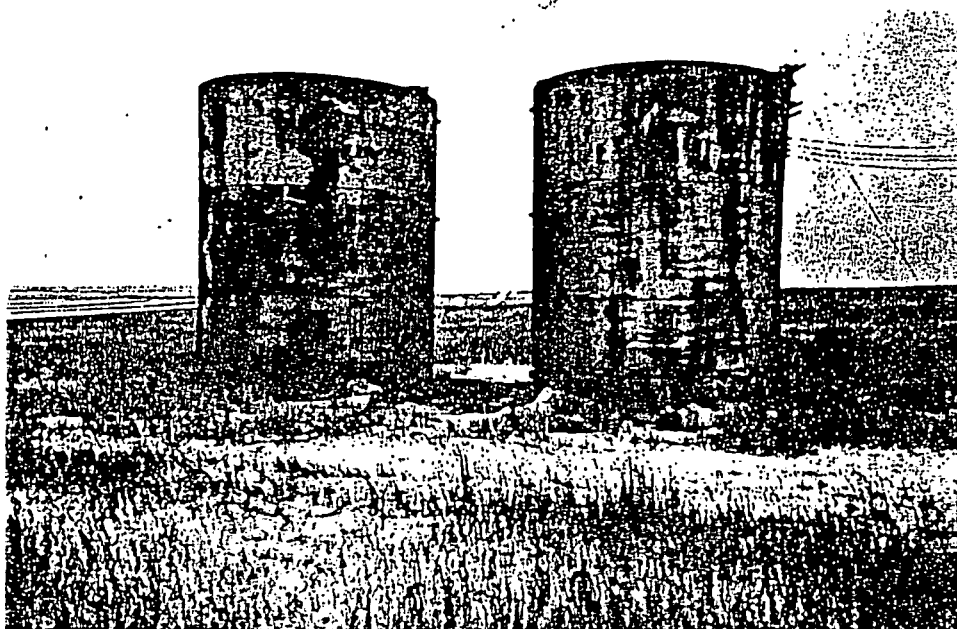
MURPHY 10399

EPU-22

1-6
SE-NW

Poplar
(4)

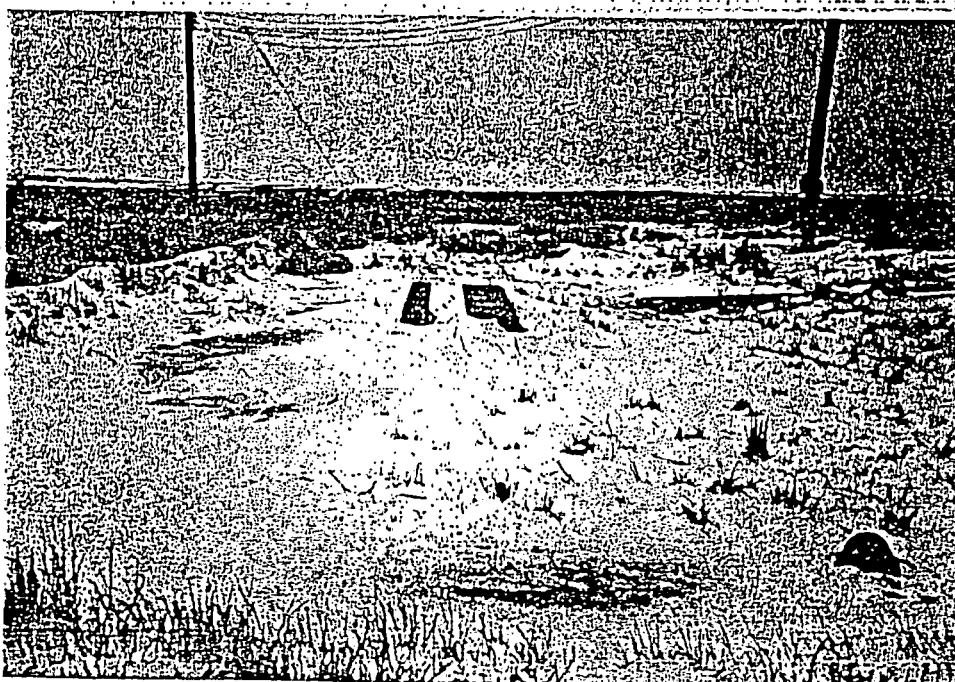




H-Battery
Abandoned tanks

1-7
SE-NW

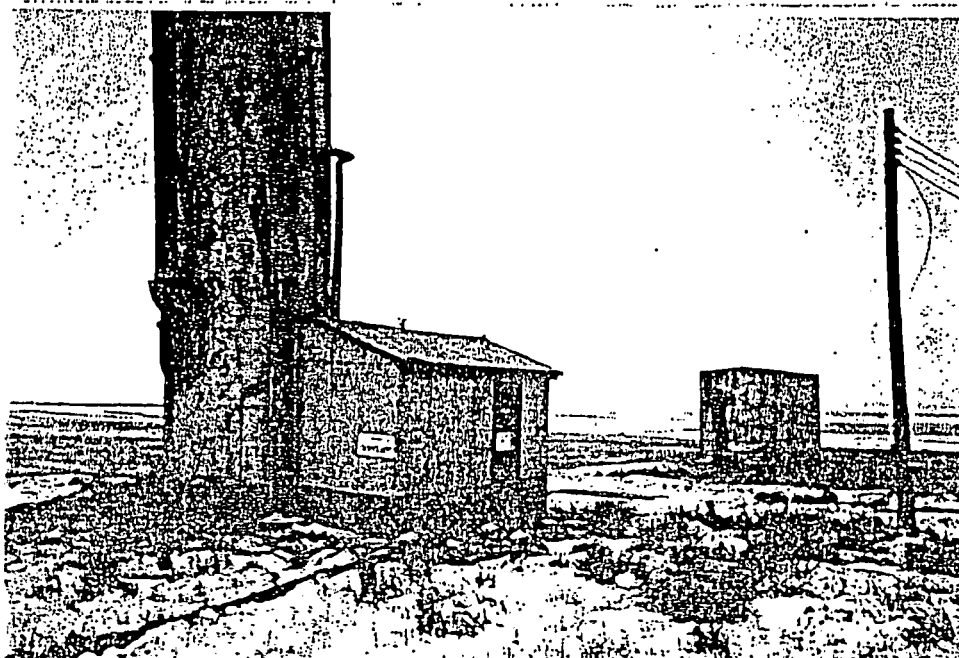
Poplar
(4)



H-Battery
Abandoned well

1-8
S-N

Poplar
(4)

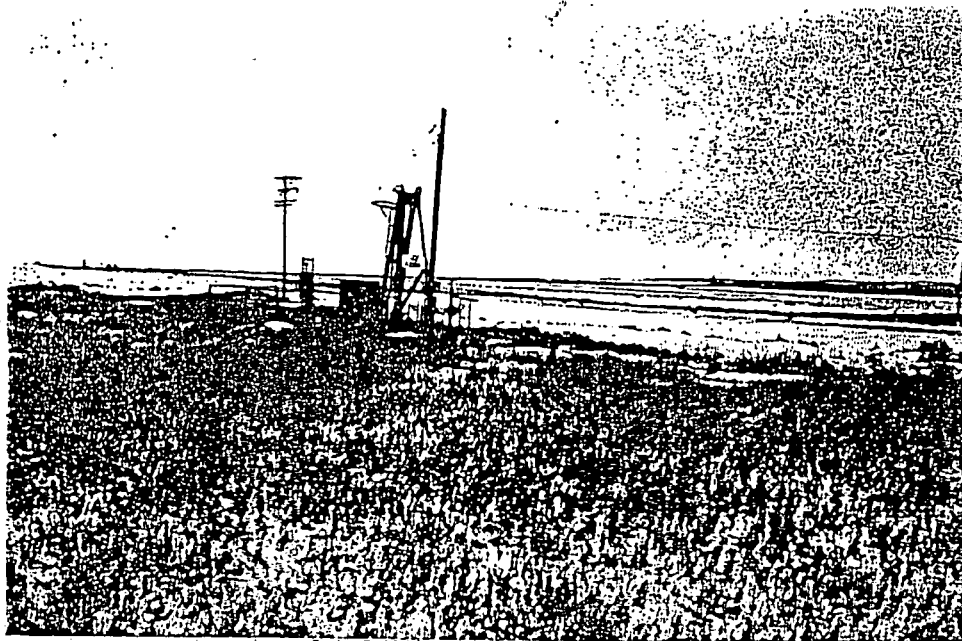


MURPHY 10400

H-Battery
Aband'ned treater

1-9
NE-SW

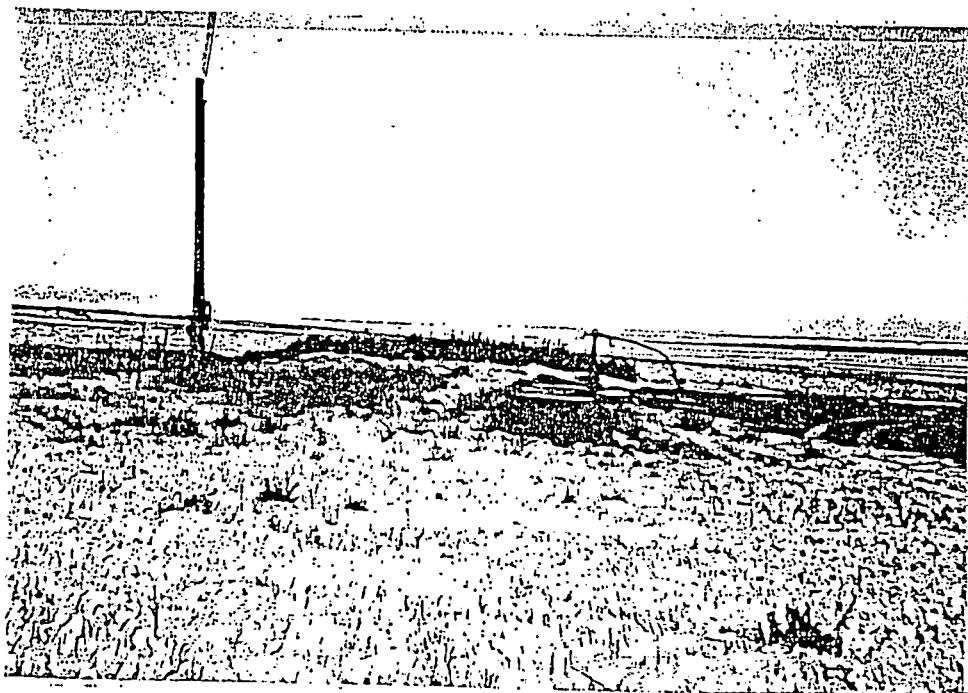
Poplar
(4)



EPU-32

1-10
SW-NNE

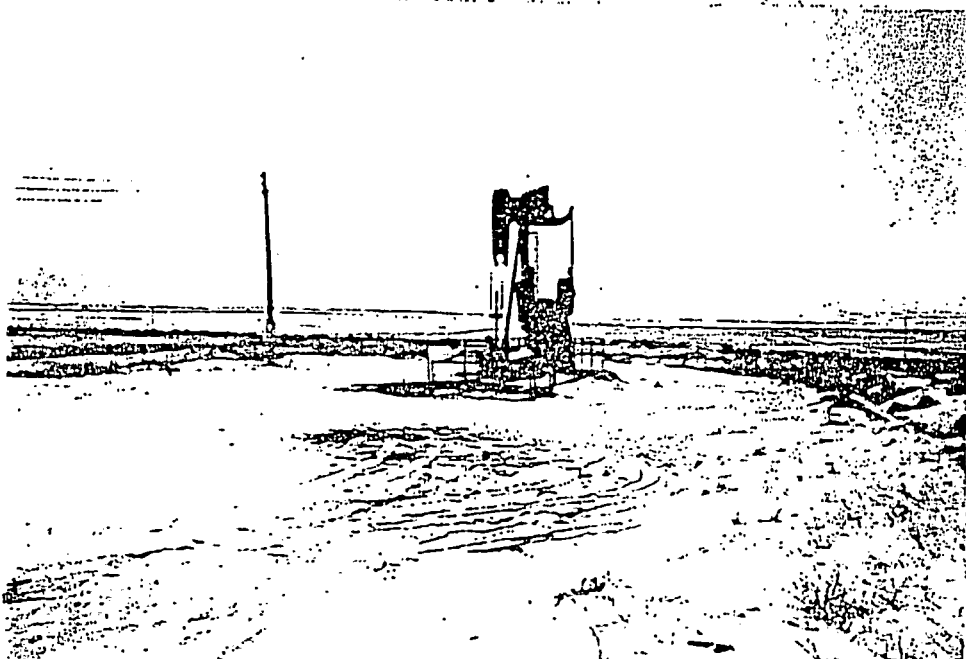
Poplar
(4)



PU-101

1-11
NE-SW

Poplar
(4)



EPU-9

1-12
E-WSW

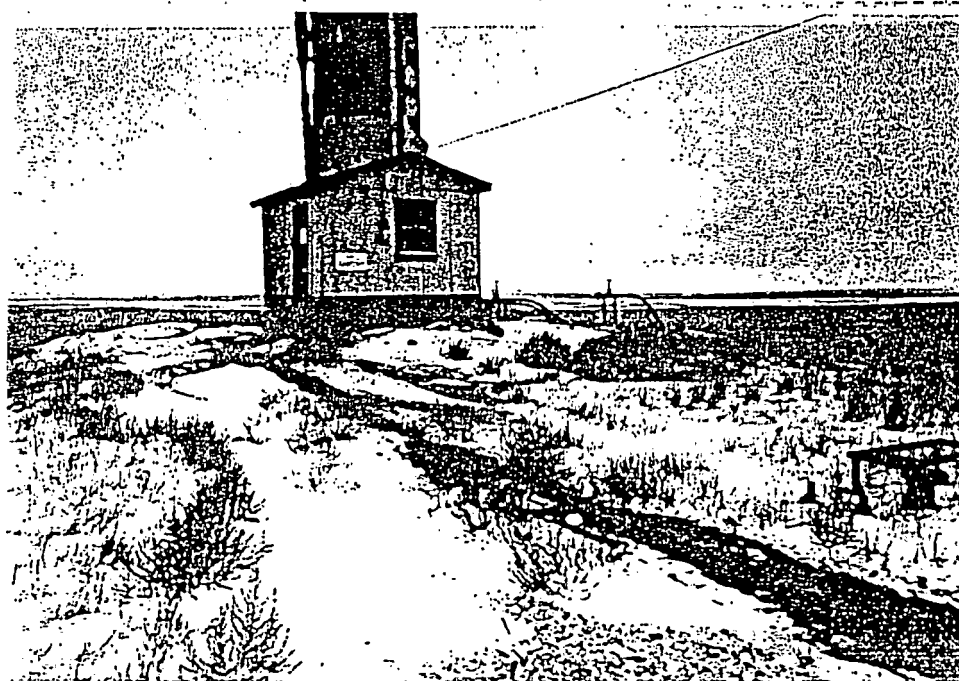
Poplar
(4)



K-Battery
Aband'ned treater

1-13
N-S

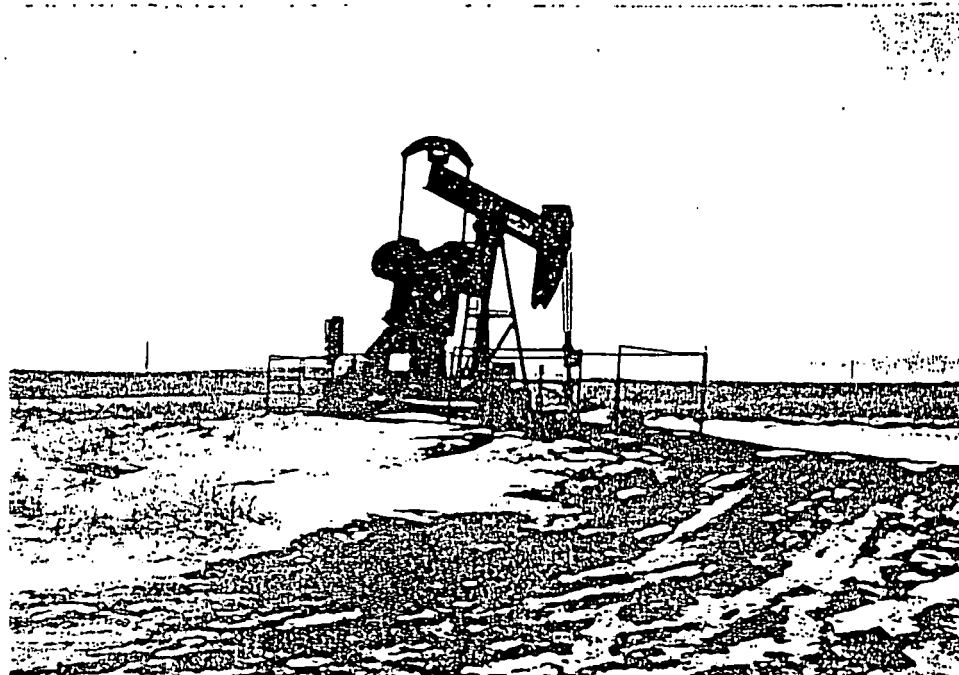
Poplar
(4).



K-Battery
New flow line

1-14
WNW-ESE

Poplar
(4)



MURPHY 10402

EPU-100

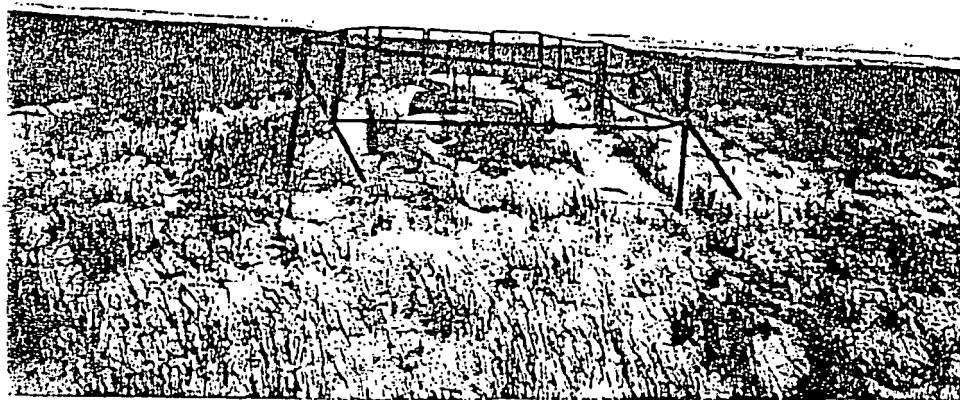
1-15
NE-SW

Poplar
(4)

EPU-58

1-16
E-W

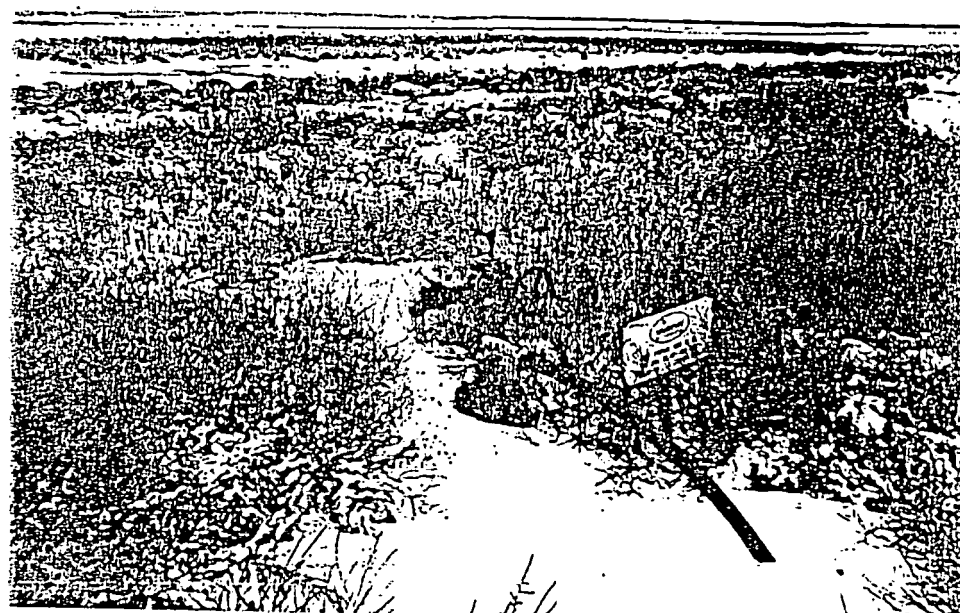
Poplar
(4)



EPU-24

1-17
NW-SE

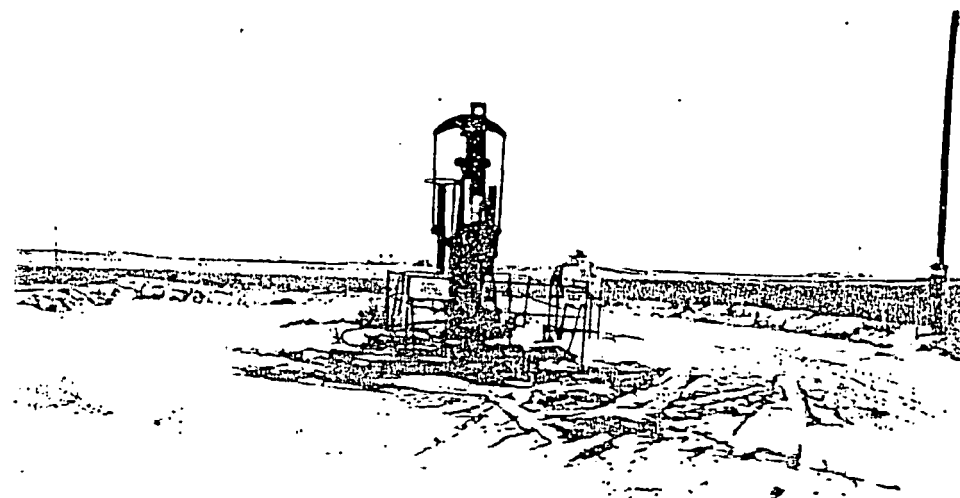
Poplar
(4)



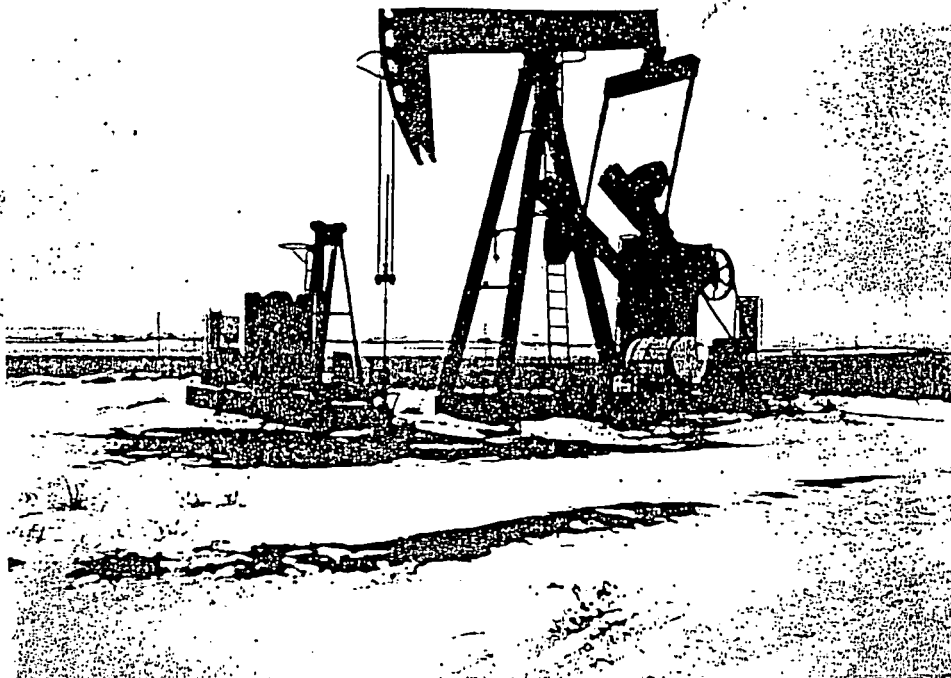
EPU-15

1-18
E-W

Poplar
(4)



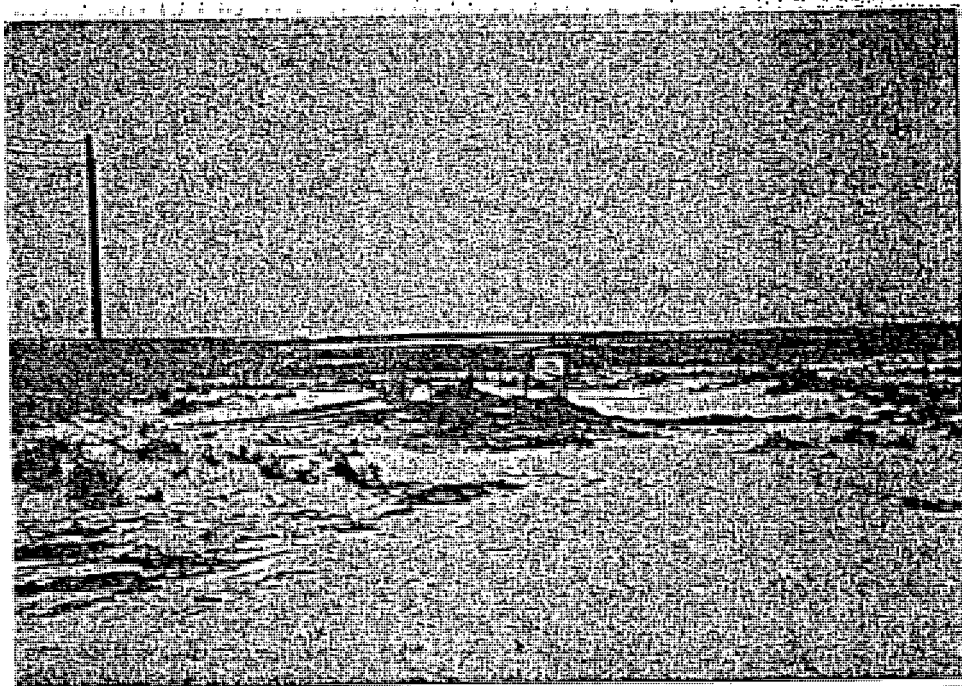
MURPHY 10403



EPU-7

1-19
SE-NW

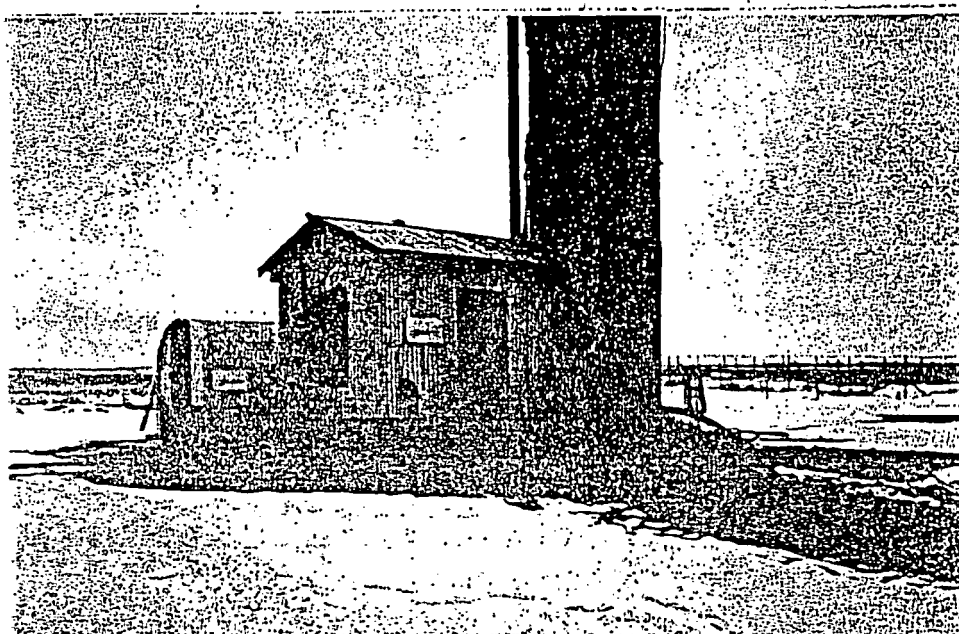
Poplar
(4)



EPU-6

1-20
N-S

Poplar
(4)



MURPHY 10404

South Central
Battery

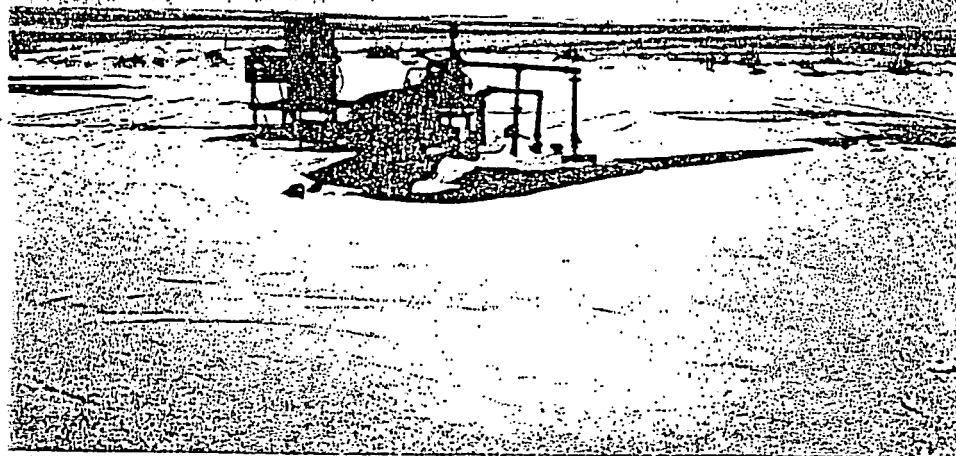
1-21
NE-SW

Poplar
(4)

South Central
Transfer Stn.

1-22
N-S

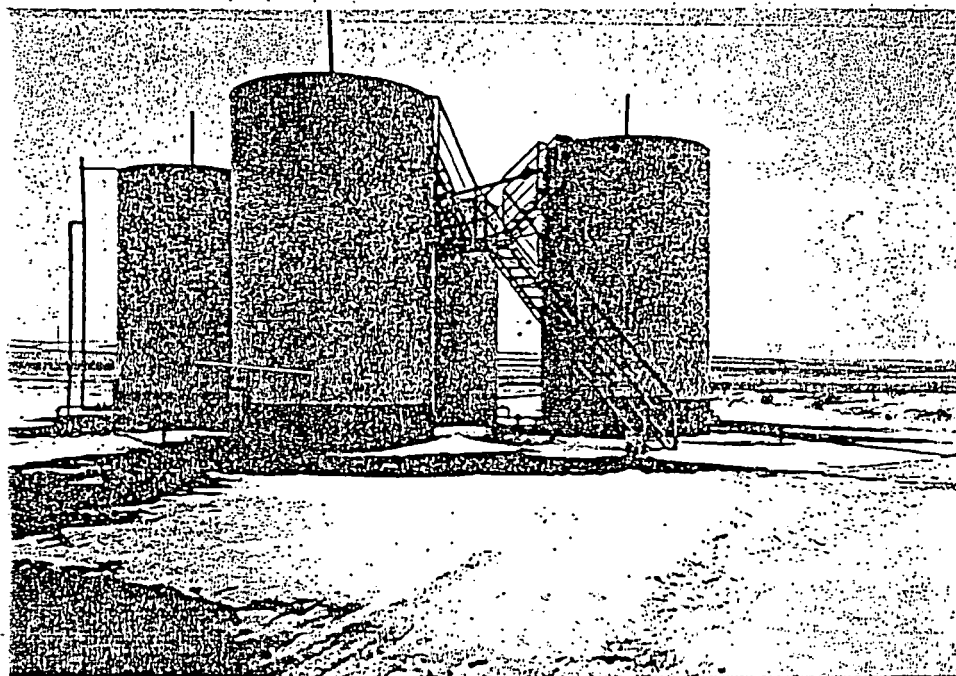
Poplar
(4)



South Central
Tanks

1-23
WNW-ESE

Poplar
(4)

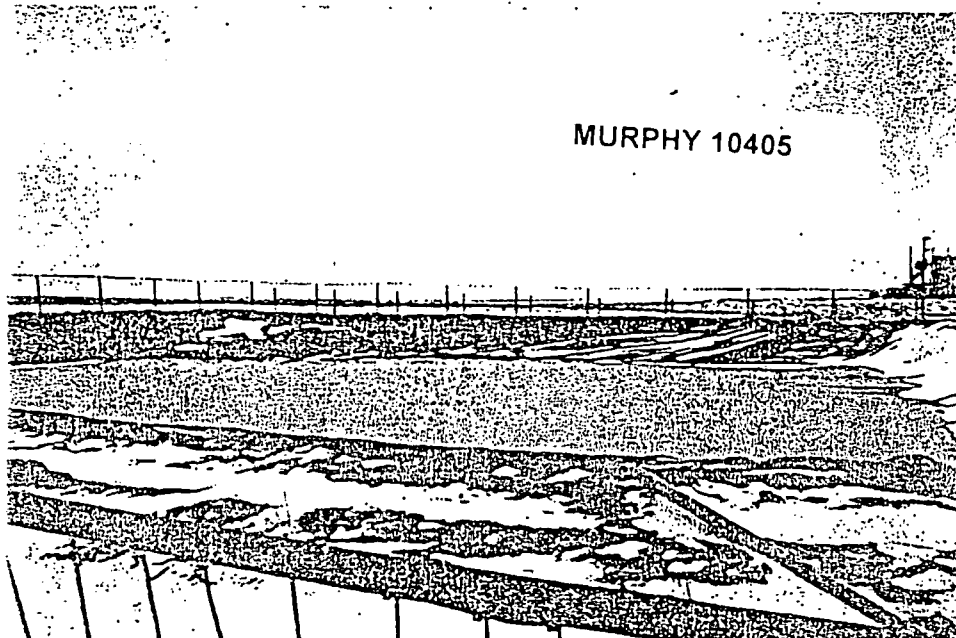


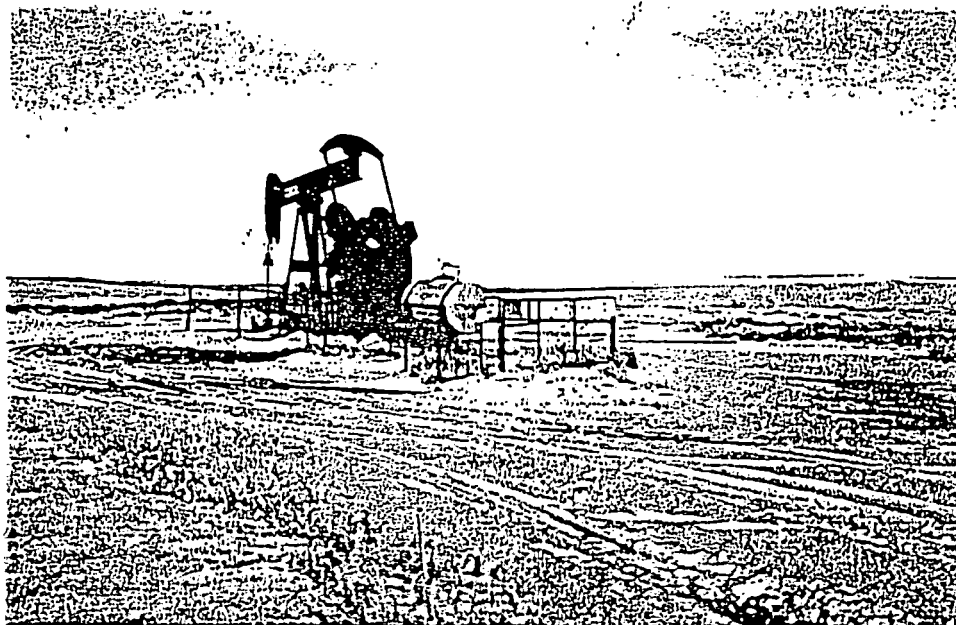
MURPHY 10405

South Central
Pit

1-24
ENE-WSW

Poplar

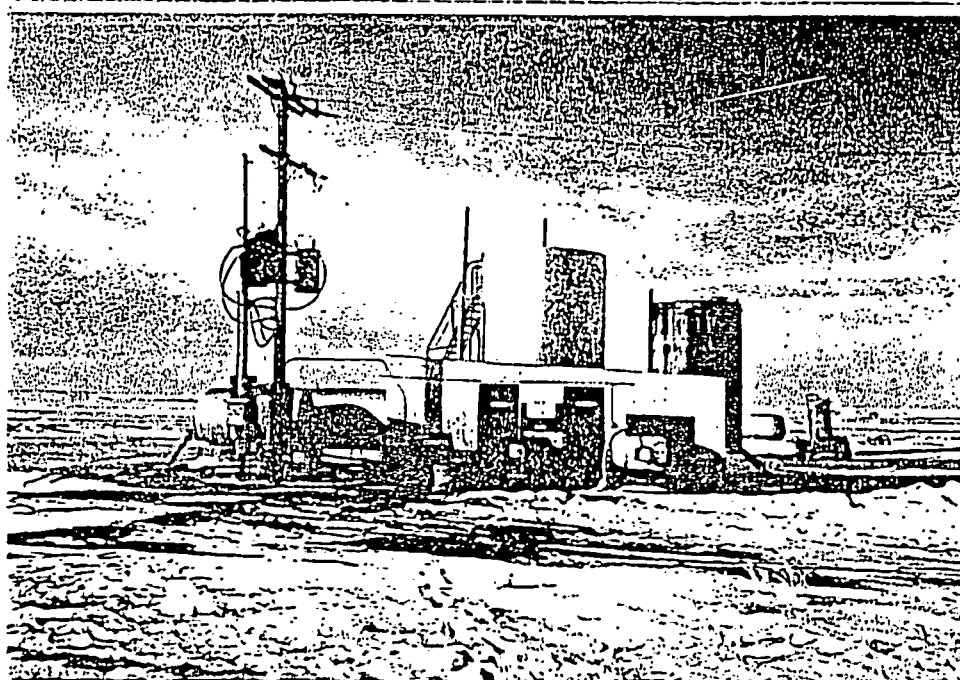




EPU-12

1-25
SE-NW

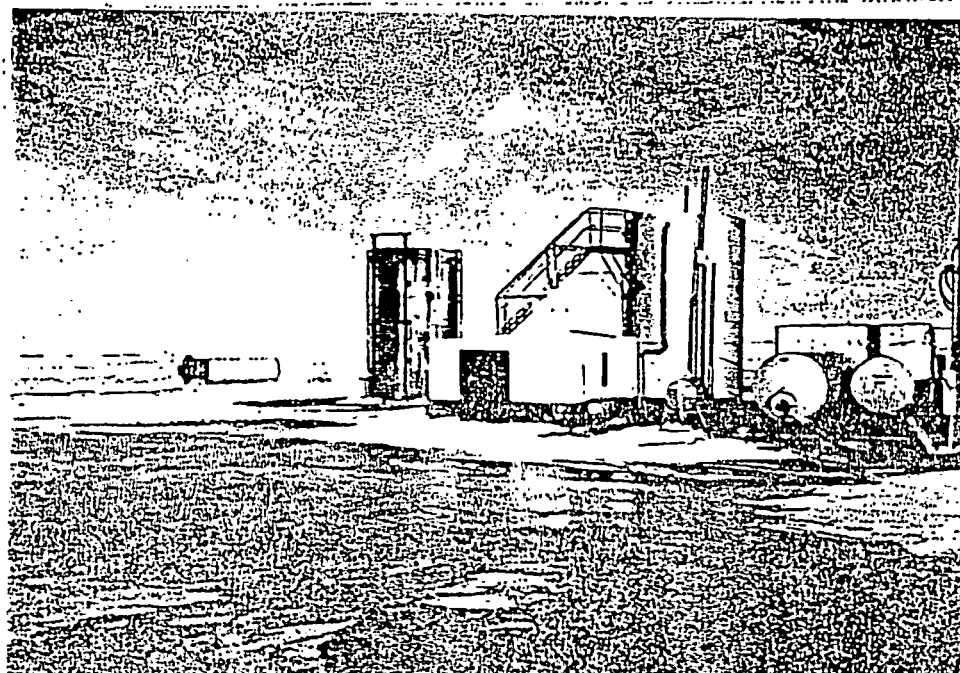
Poplar
(4)



South Central
Saltwater Disp.

1-26
SE-NW

Poplar
(4)



MURPHY 10406

South Central
Saltwater Disp.

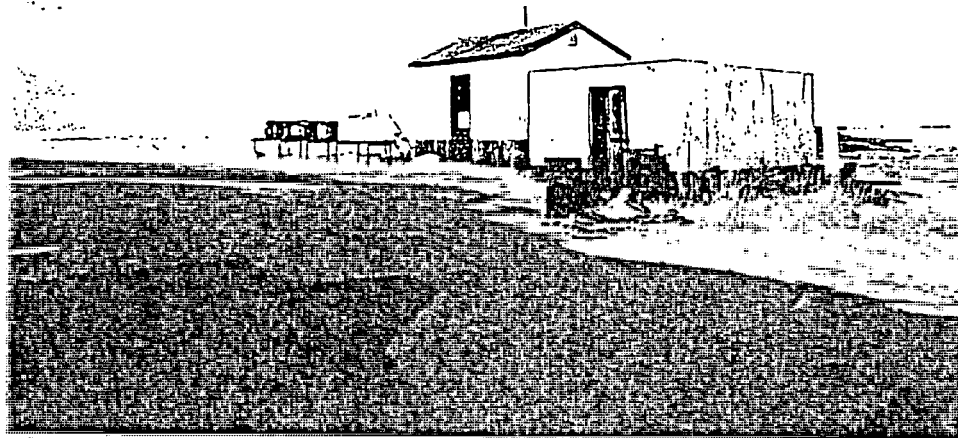
1-27
E-W

Poplar
(4)

Pumpers' Shed

2-1
SE-NW

Poplar
(4)



Huber 5

2-2
ENE-WSW

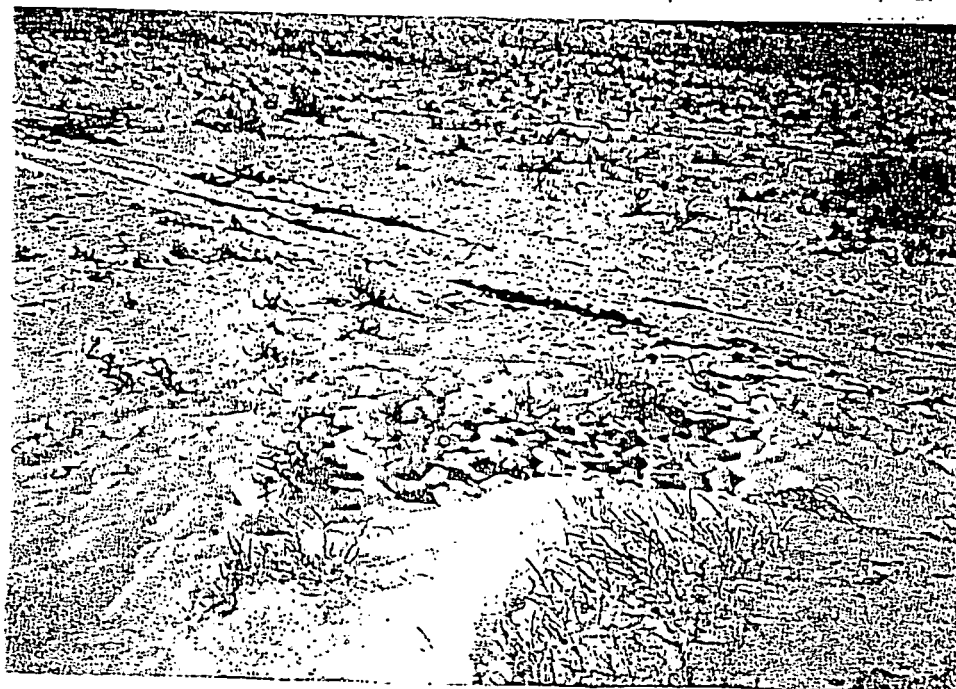
Poplar
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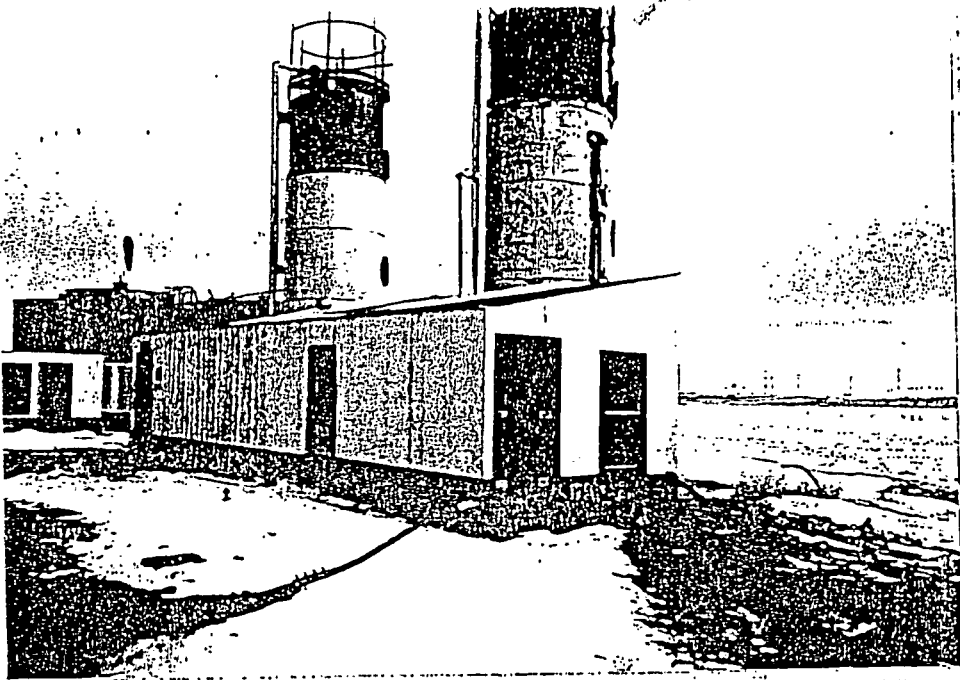


Huber Battery
Crude Spill

2-3
NE-SW

Poplar
(4)

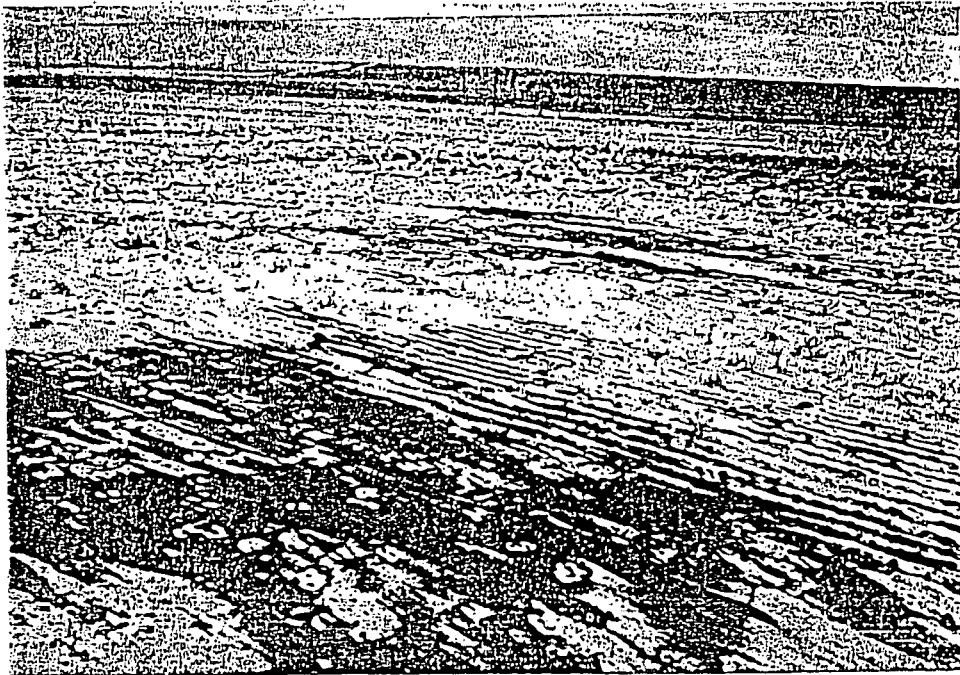




Huber Battery
Treaters

2-4
SW-NE

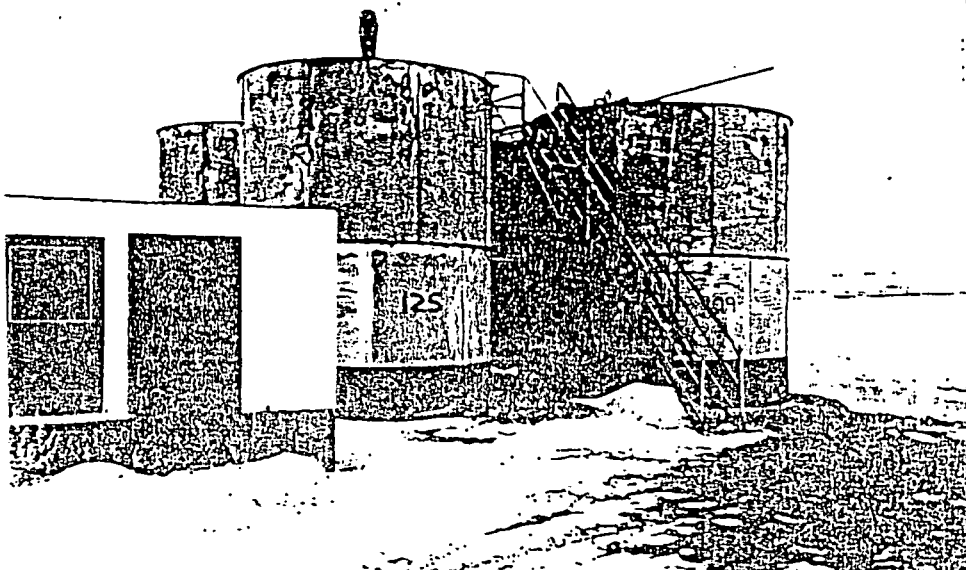
Poplar
(4)



Huber Battery
Saltwater Spill

2-5
SW-NE

Poplar
(4)



MURPHY 10408

Huber Battery
Transfer & Tanks

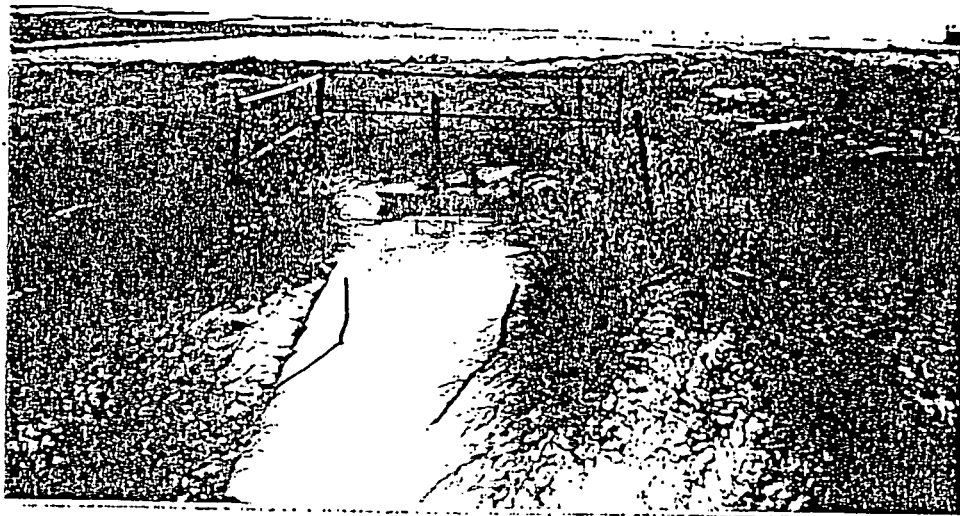
2-6
SSW-NNE

Poplar
(4)

Huber 4

2-7
N-S

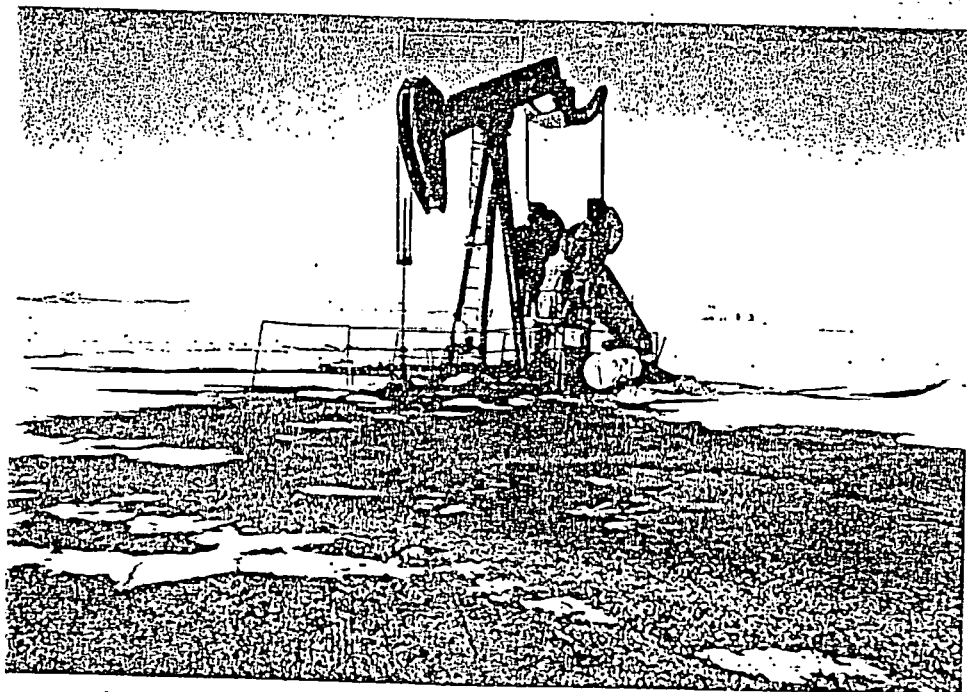
Poplar
(4)



Huber 4A

2-8
NW-SE

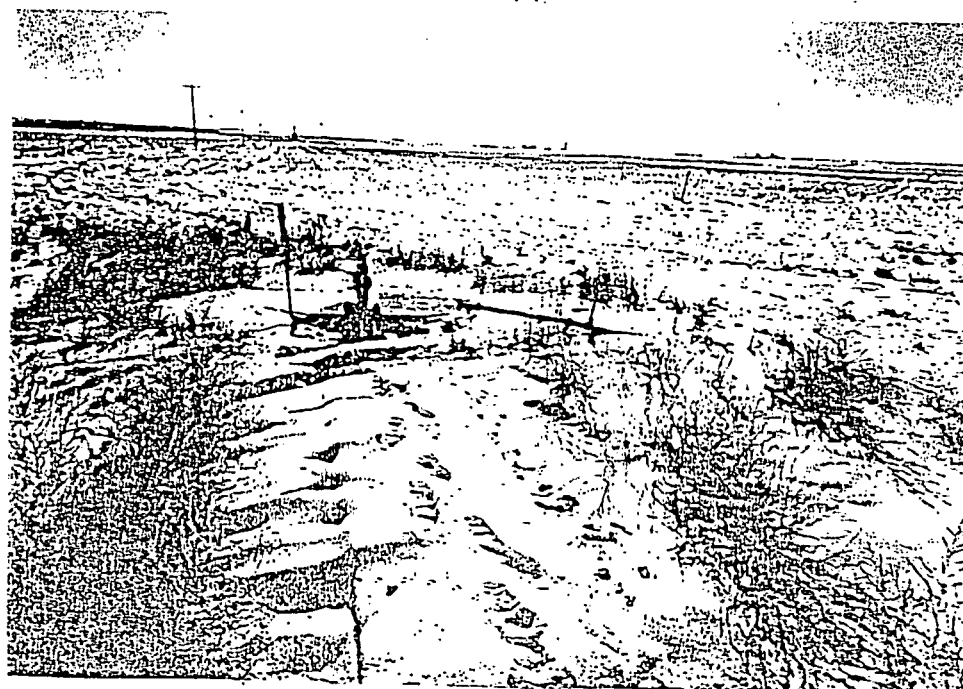
Poplar
(4)



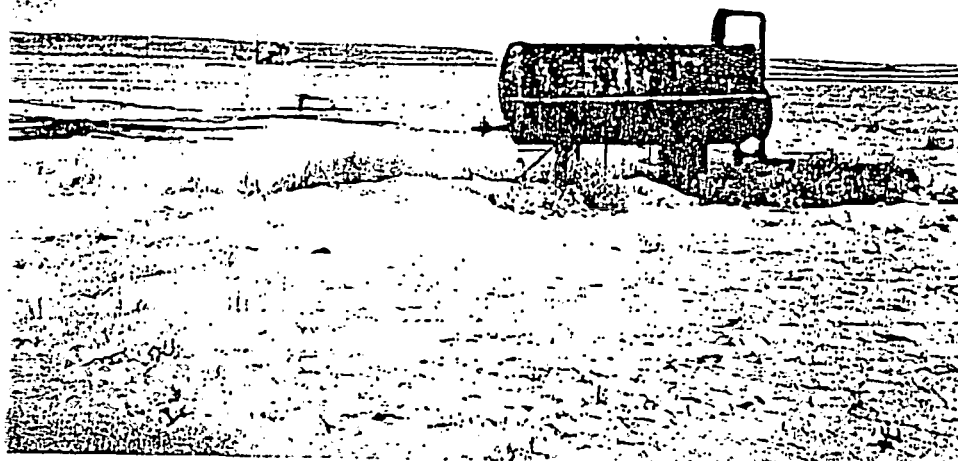
Huber 2

2-9
N-S

Poplar
(4)



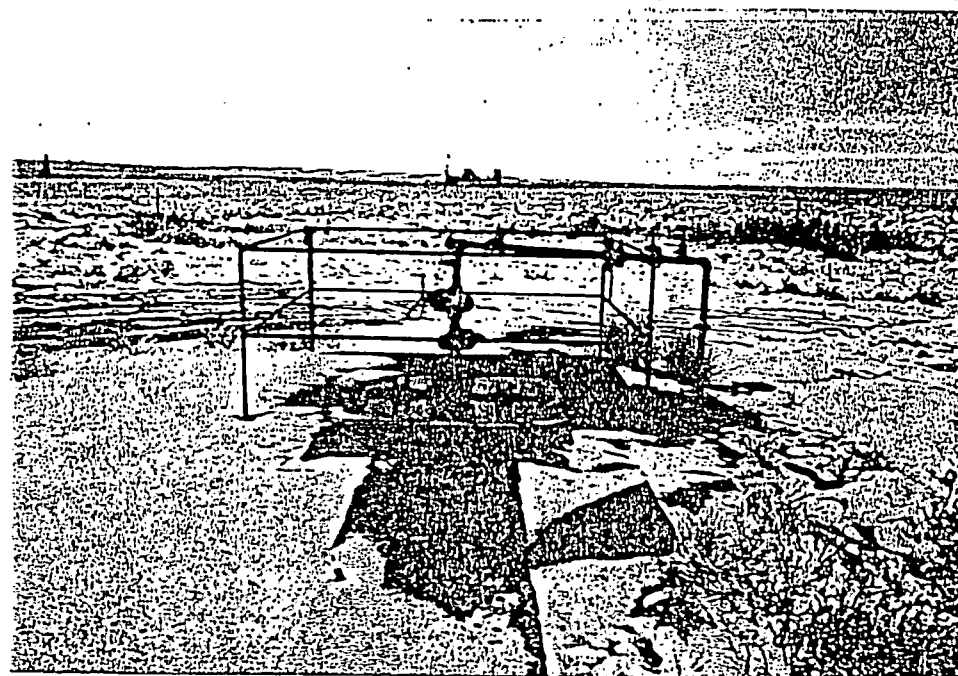
MURPHY 10409



Huber 6
Salt Water Disp.

2-10
W-E

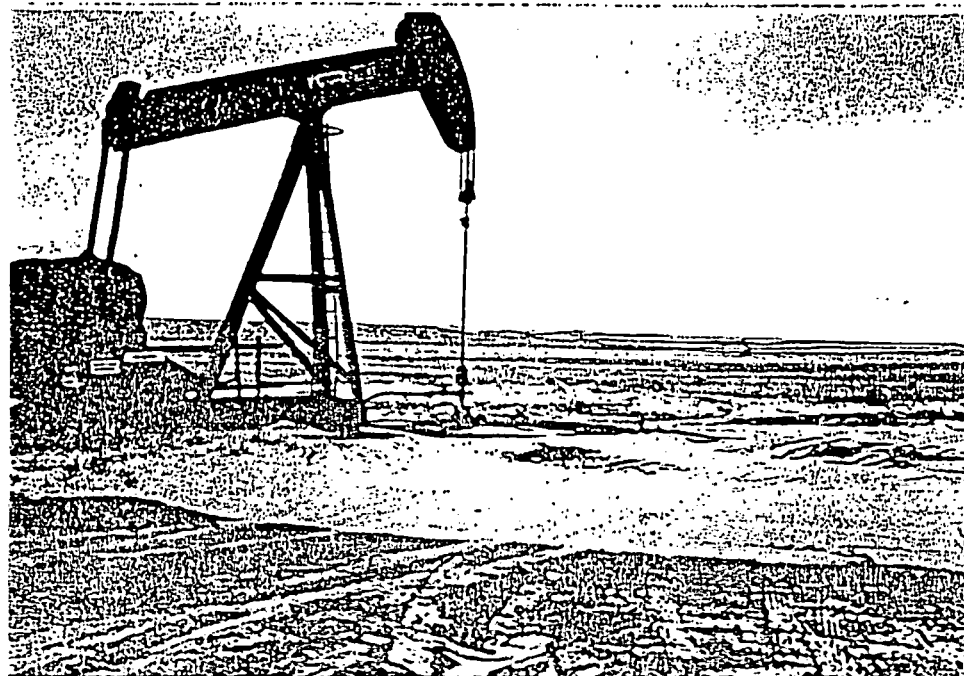
Poplar
(4)



Huber 3

2-11
N-S

Poplar
(4)



MURPHY 10410

Huber 1

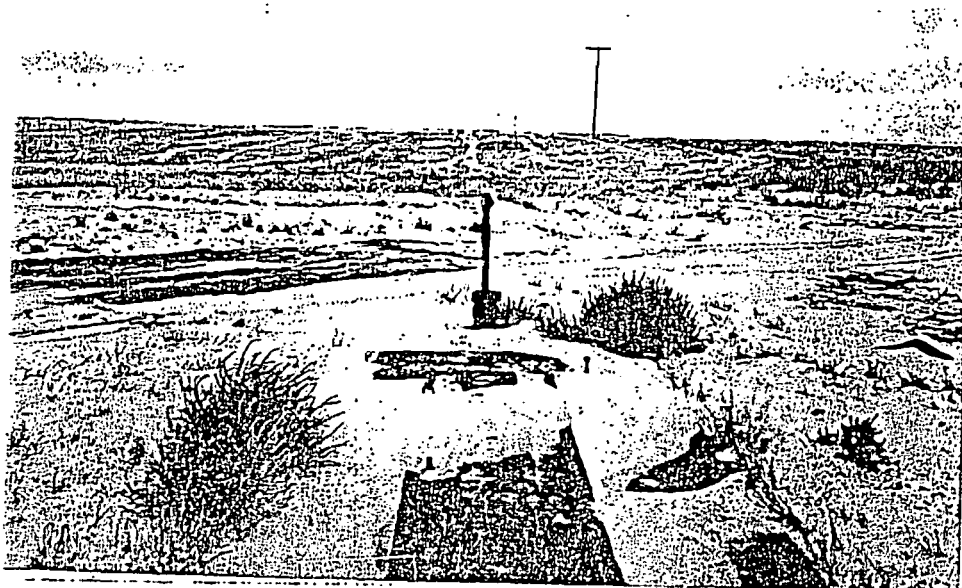
2-12
SE-NW

Poplar
(4)

EPU-14

2-13
N-S

Poplar
(4)



F-Battery
Backhoe Pit

2-14
SE-NW

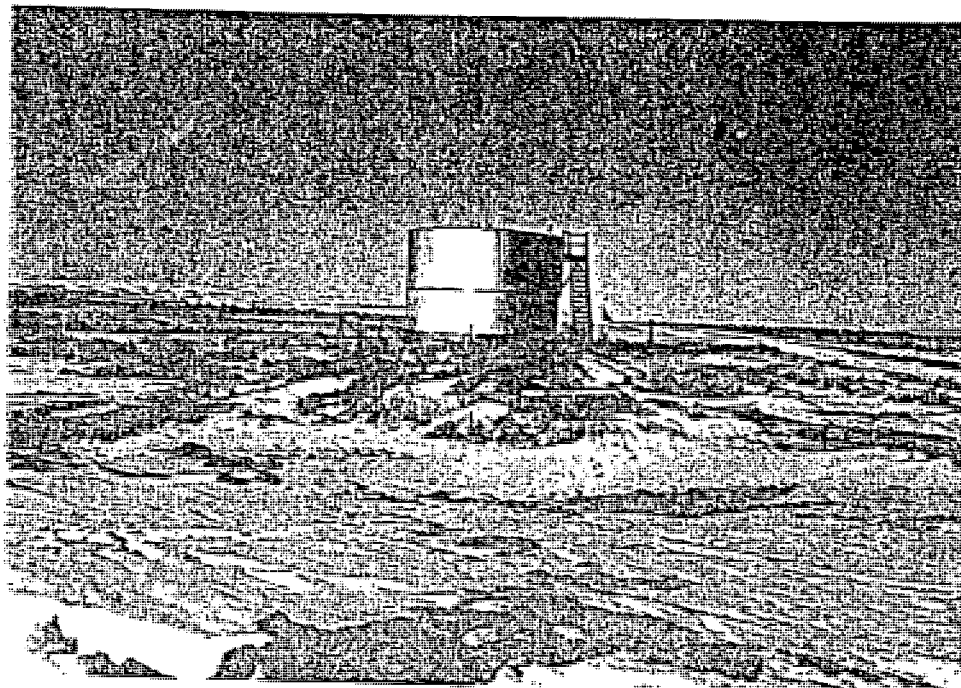
Poplar
(4)



F-Battery
The battery

2-15
S-N

Poplar
(4)

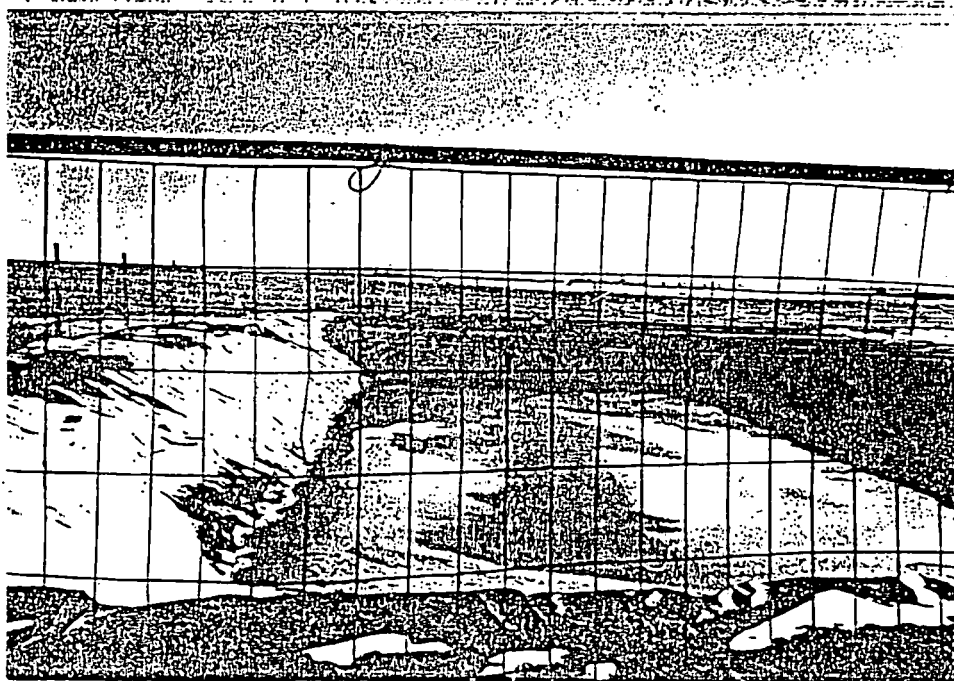




EPU-39

2-16
SE-NW

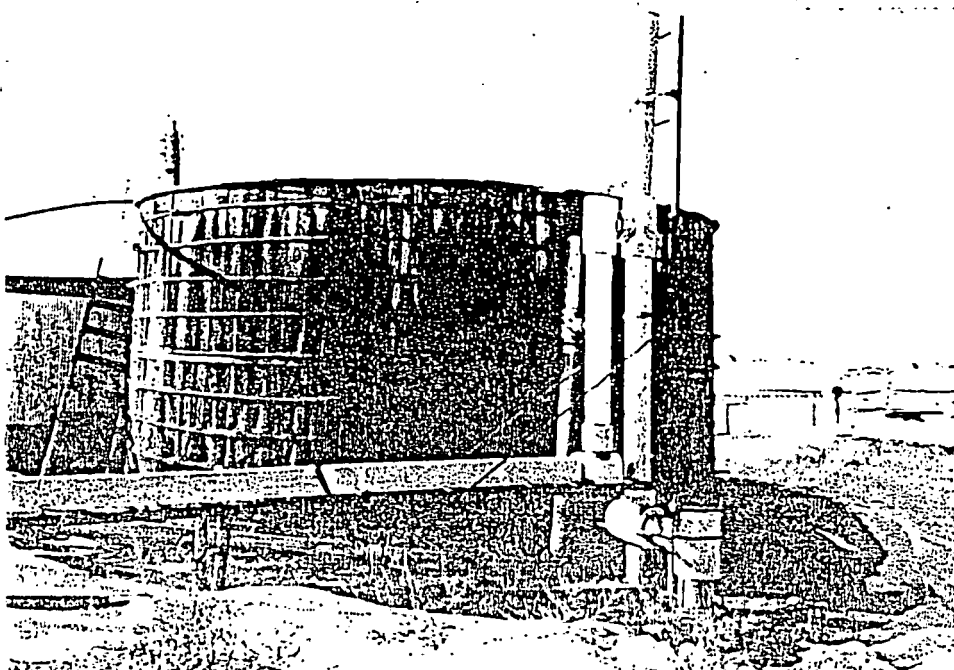
Poplar
(4)



EPU-80D
Salt water pit

2-17
N-S

Badger Creek
(3)



MURPHY 10412

EPU-80D
Wood Tank

2-18
ESE-W/NW

Badger Creek
(3)

EPU-80D
Stressed Veg.

2-19
ESE-WNW

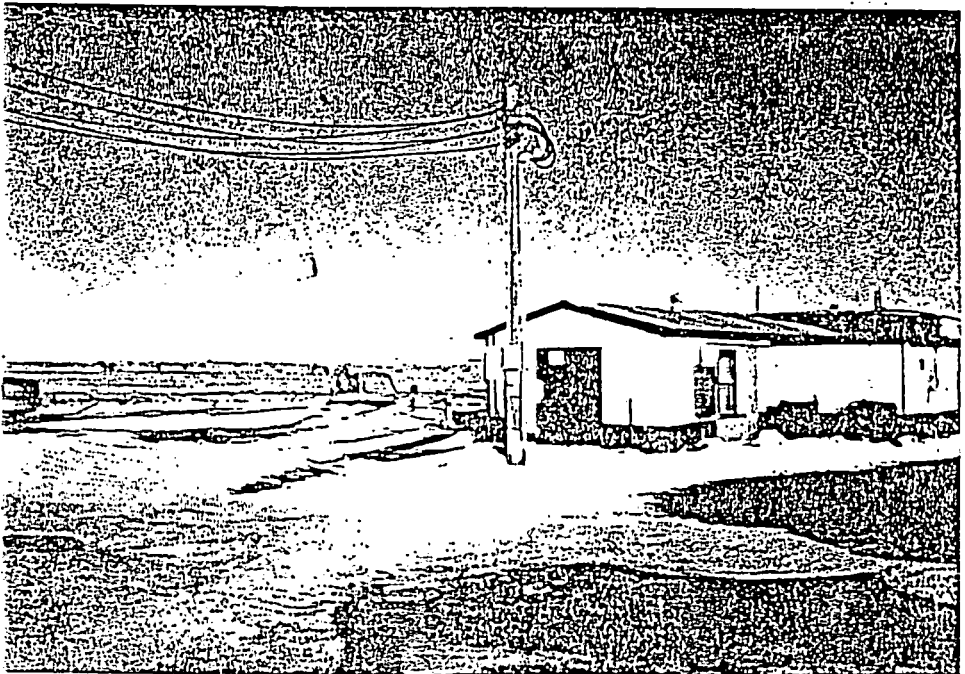
Badger Creek
(3)



EPU-80D
Salt Water Disp.

2-20
SW-NE

Badger Creek
(3)

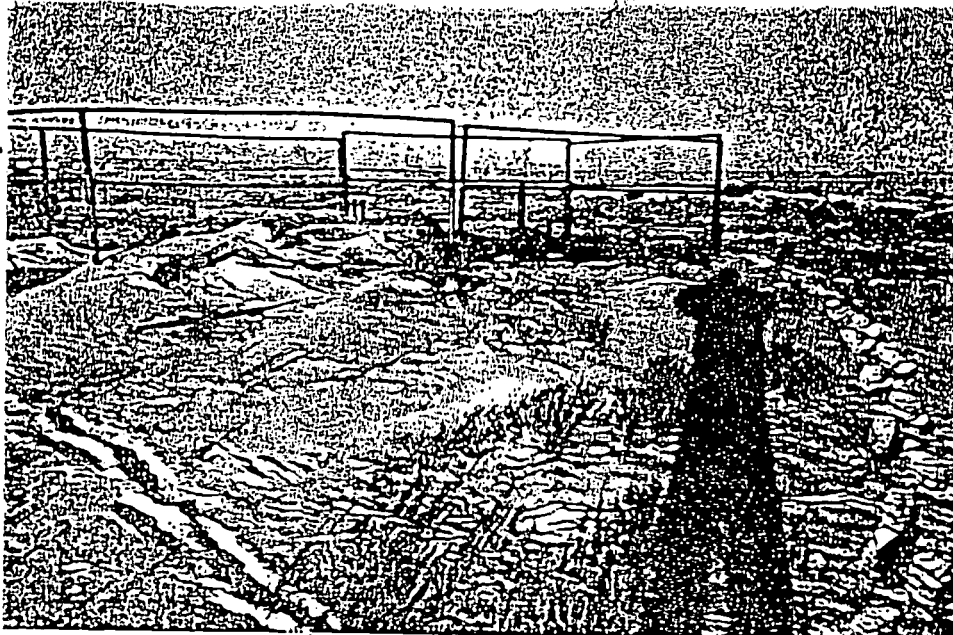


EPU-41

2-21
WSW-ENE

Badger Creek
(3)

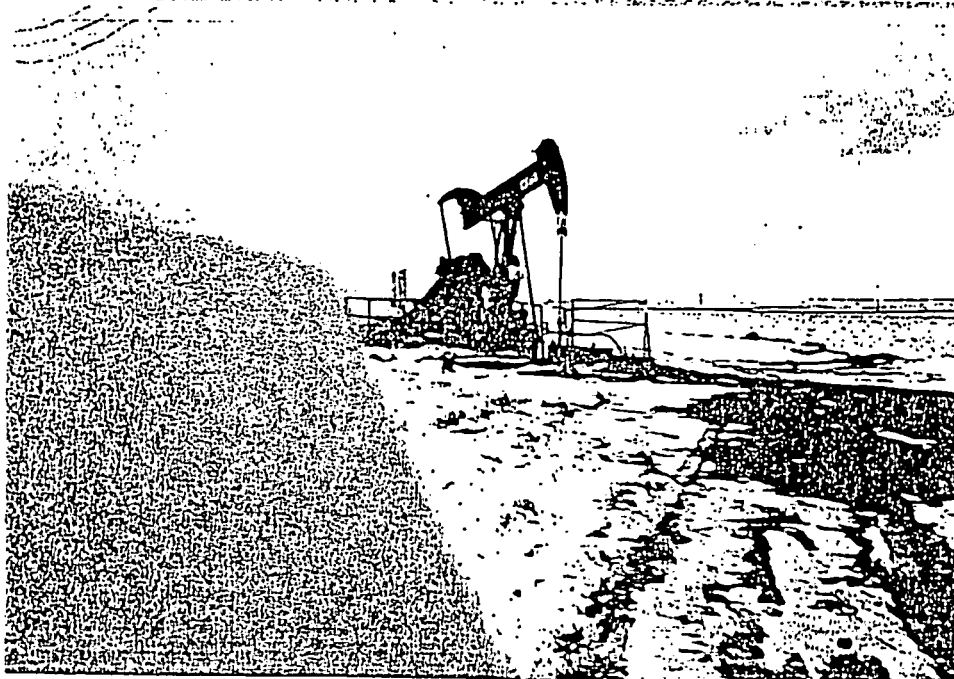




EPU-45

2-22
SW-NE

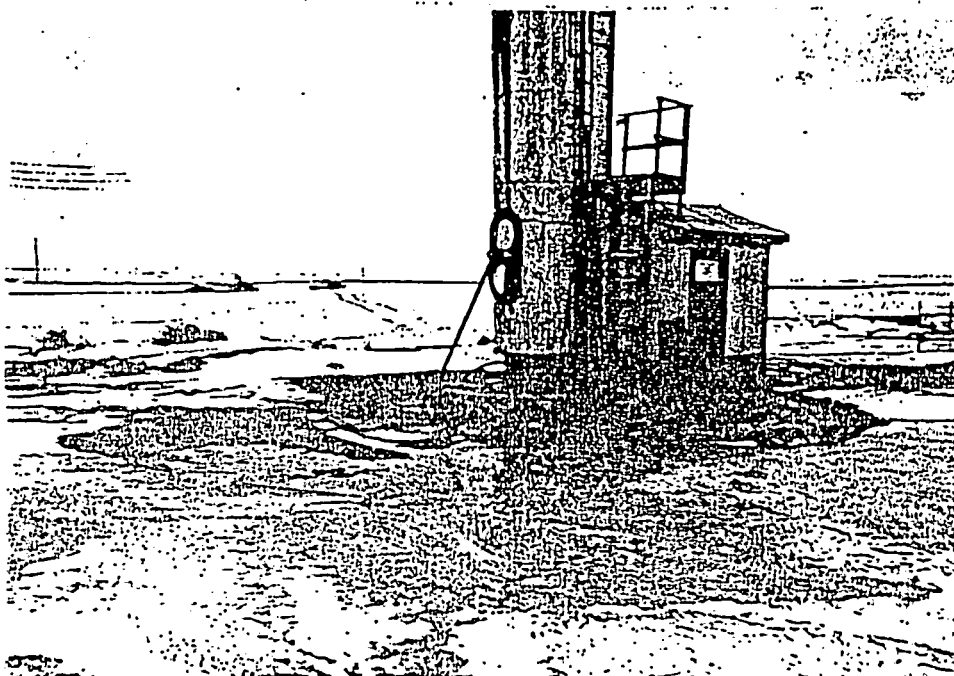
Badger Creek
(3)



EPU-5

2-23
SE-NW

Poplar
(4)



MURPHY 10414

C-Battery
Treater

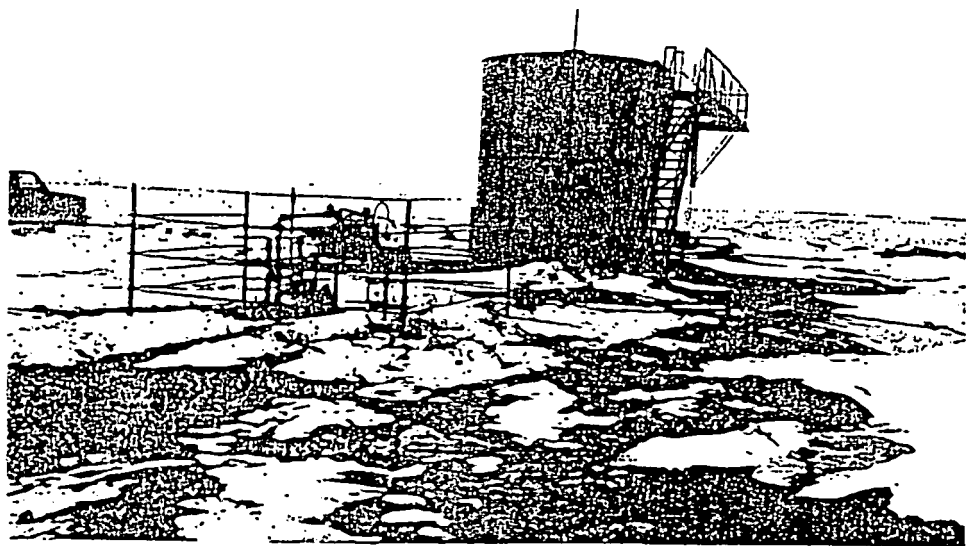
2-24
SE-NW

Poplar
(4)

C-Battery
Pump & tanks

2-25
SE-NW

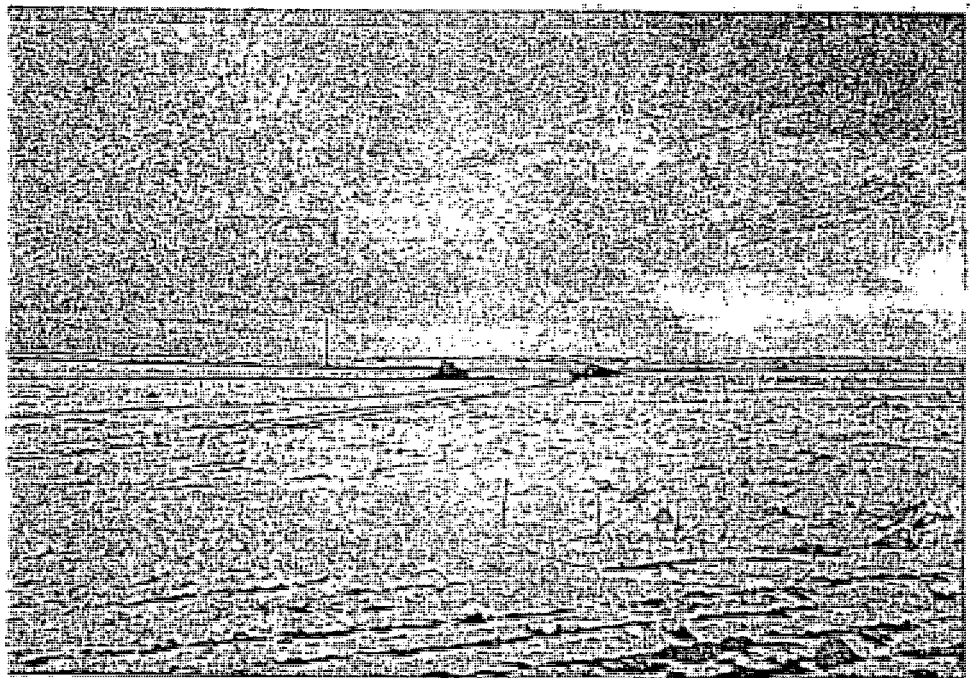
Poplar
(4)



Flow line repairs
Near C-Battery

2-26
ESE-WNW

Poplar
(4)

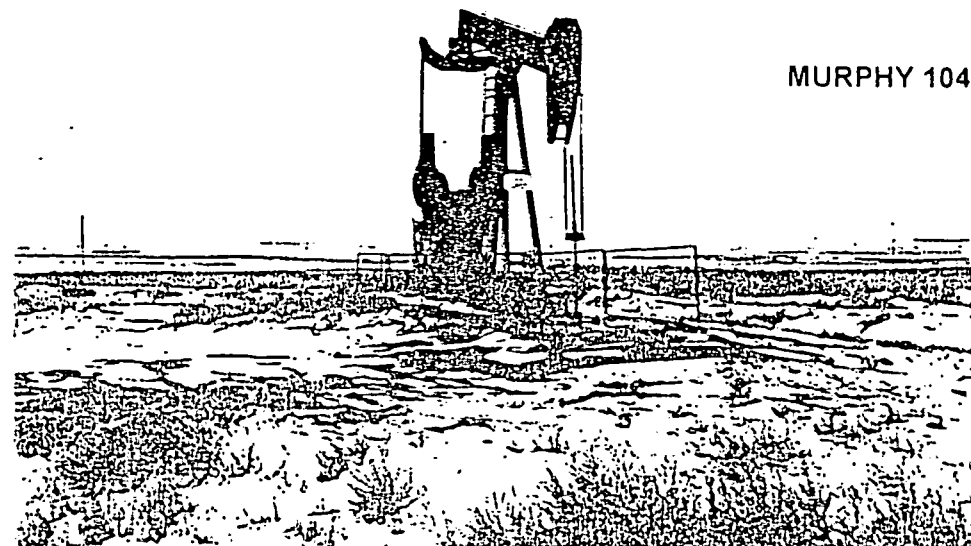


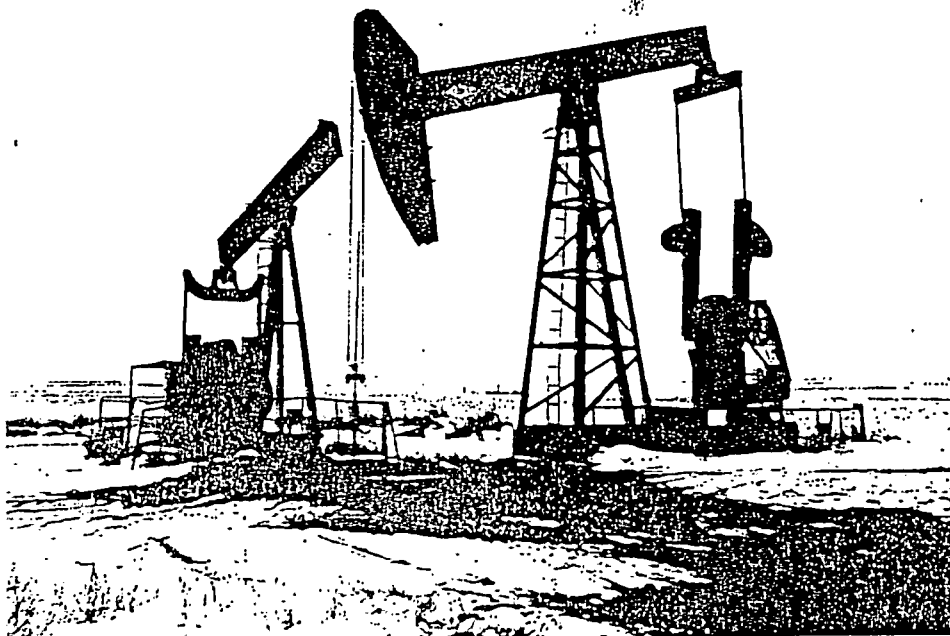
MURPHY 10415

EPU-85

2-27
E-W

Poplar
(4)

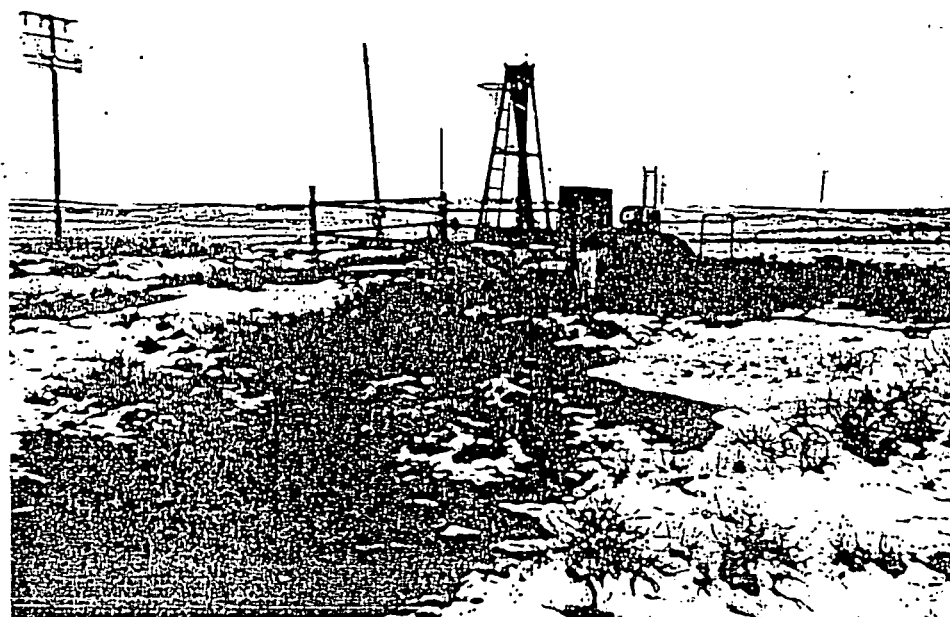




EPU-18

3-1
SE-NW

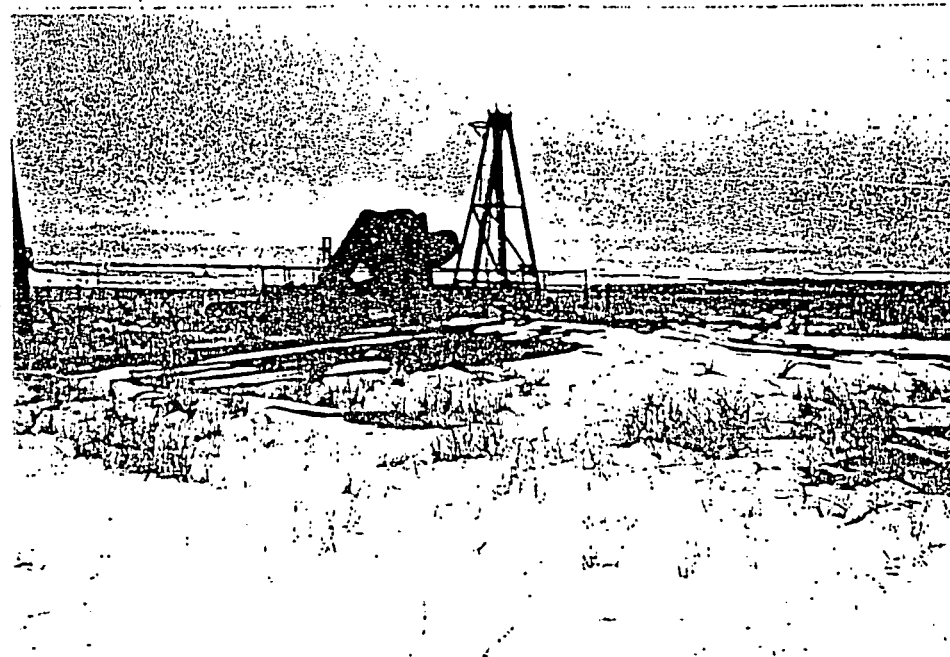
Poplar
(4)



EPU-1

3-2
SW-NE

Poplar
(4)



MURPHY 10416

EPU-16

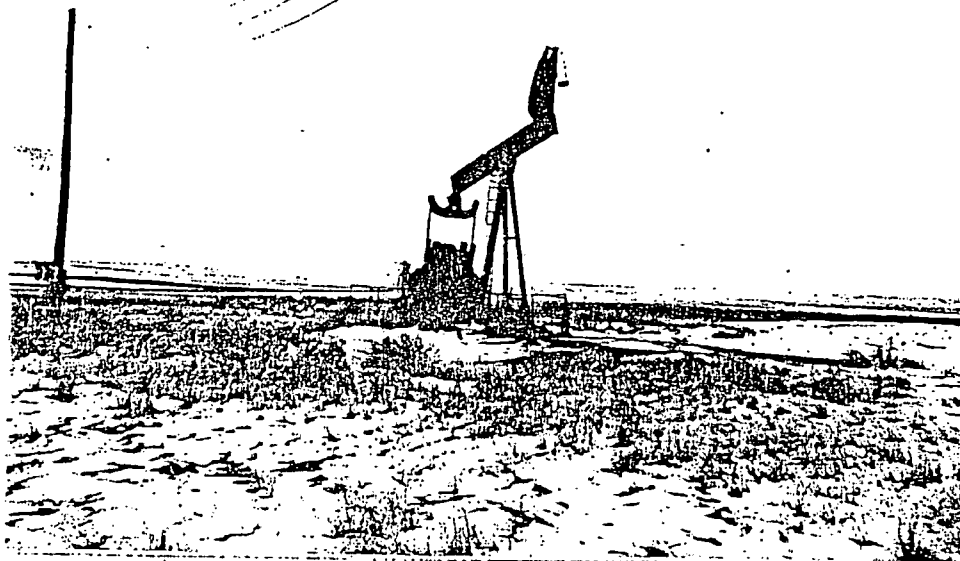
3-3
NE-SW

Poplar
(4)

EPU-4

3-4
SE-NW

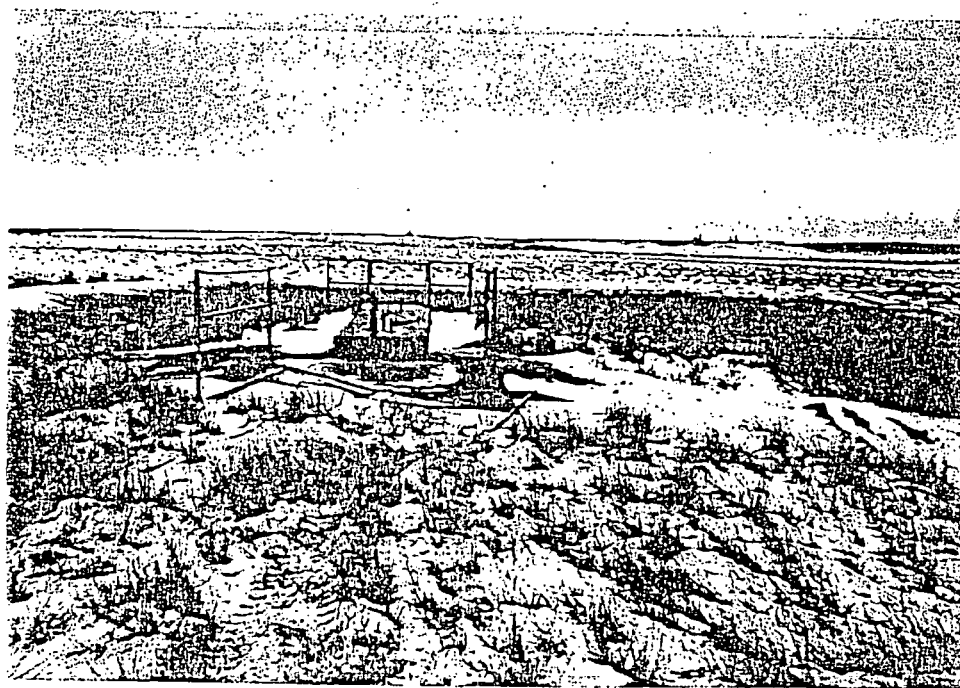
Poplar
(4)



EPU-3

3-5
N-S

Poplar
(4)

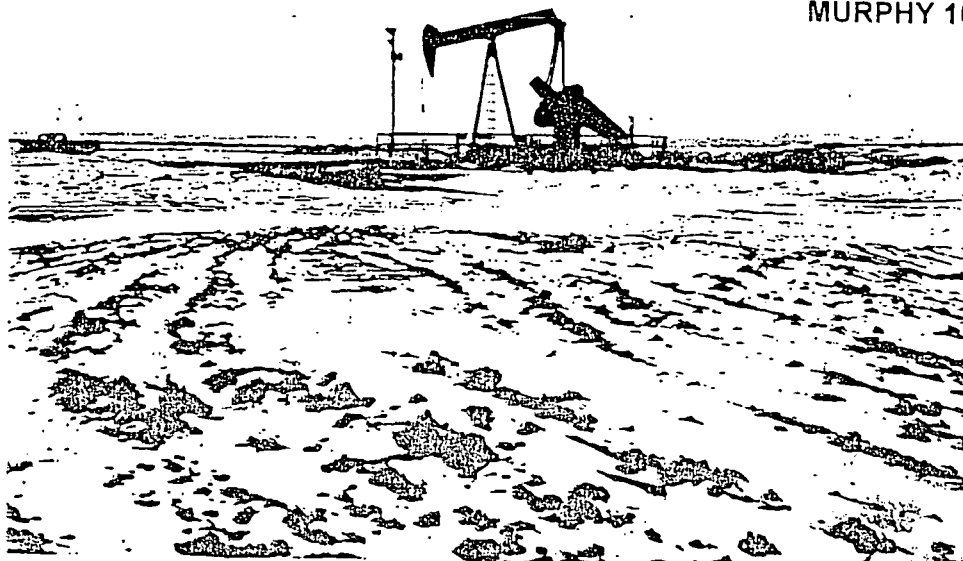


MURPHY 10417

EPU-88

3-6
ENE-WSW

Poplar
(4)

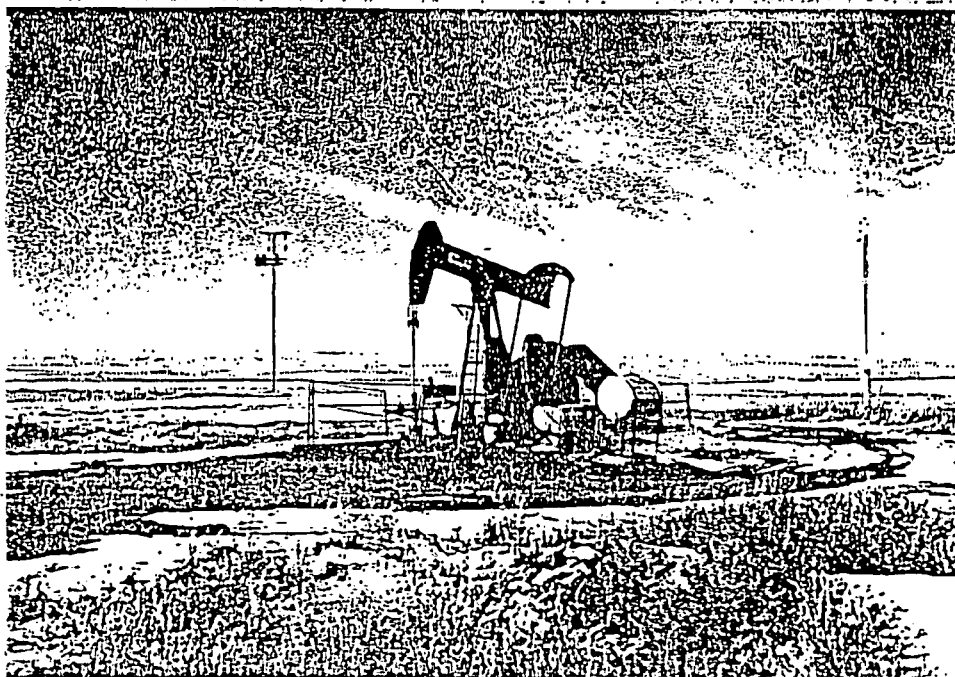




EPU-43

3-7
E-W

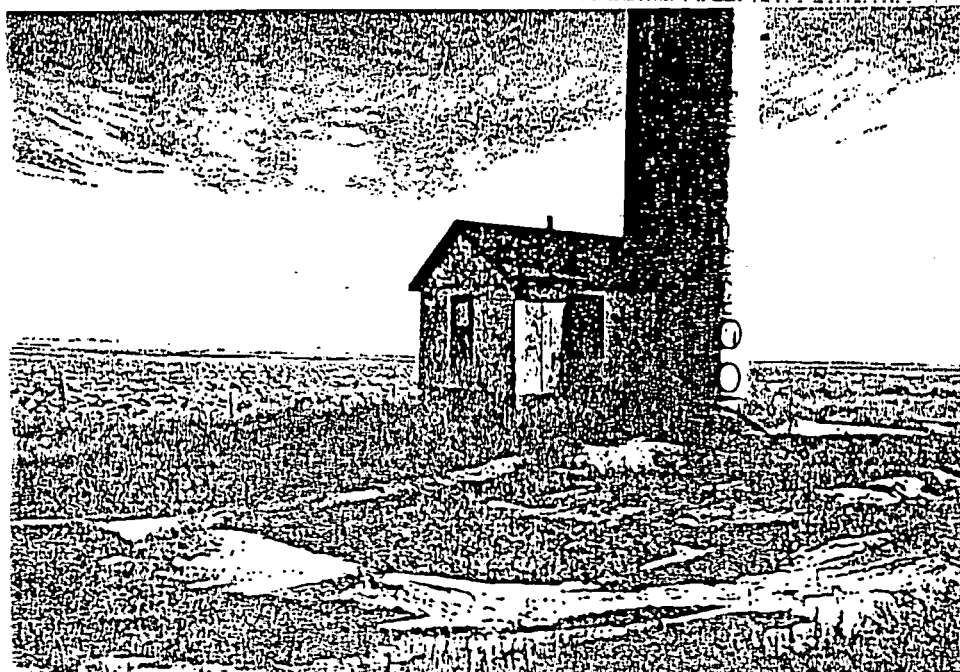
Poplar
(4)



EPU-66

3-8
SE-NW

Poplar
(4)



MURPHY 10418

Q-BATTERY
Treater

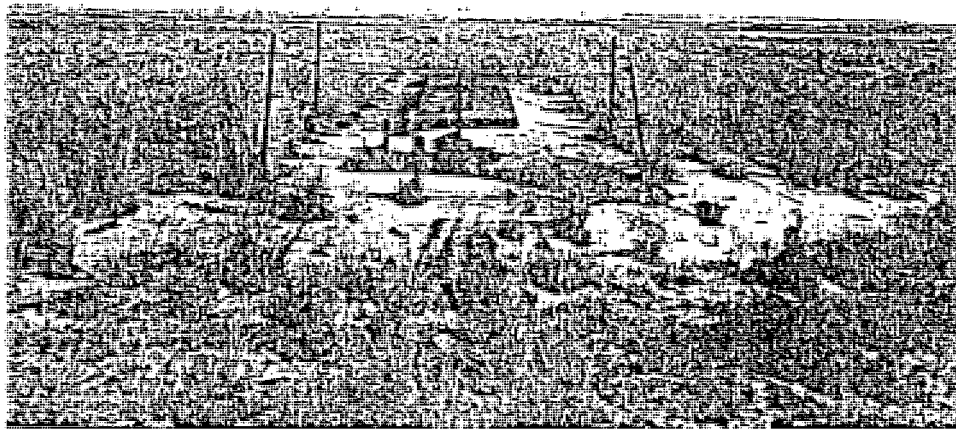
3-9
NW-SE

Poplar
(4)

EPU-89

3-10
W-E

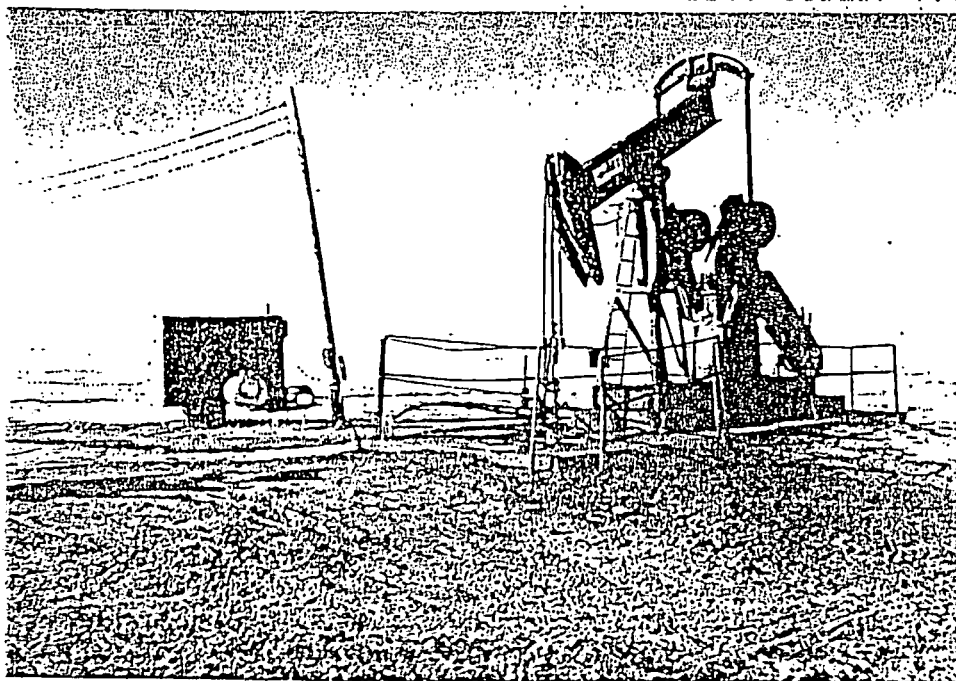
Poplar
(4)



EPU-83

3-11
SE-NW

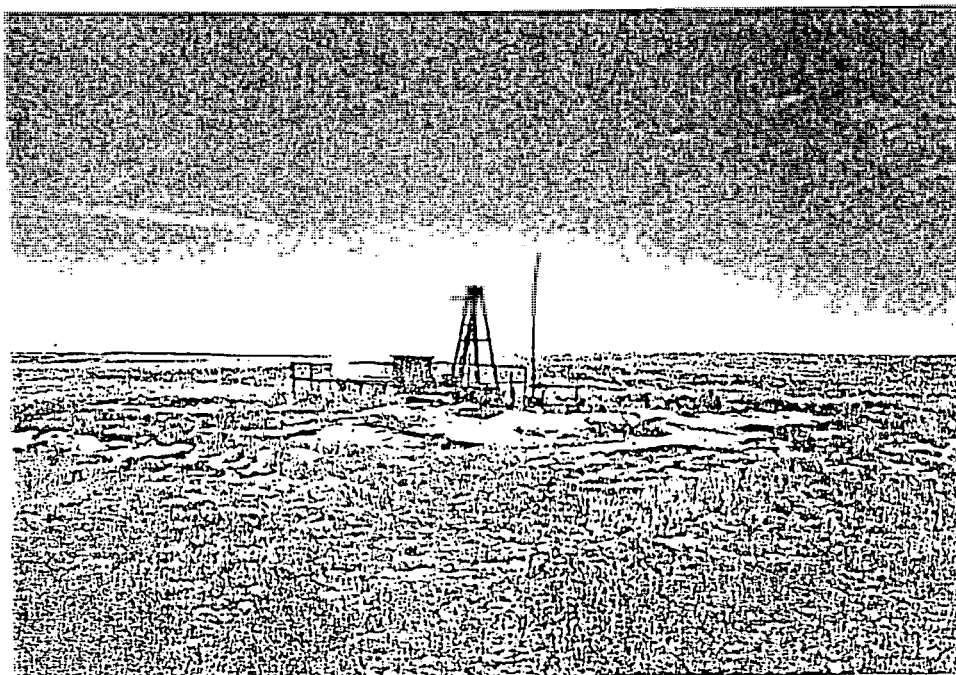
Poplar
(4)

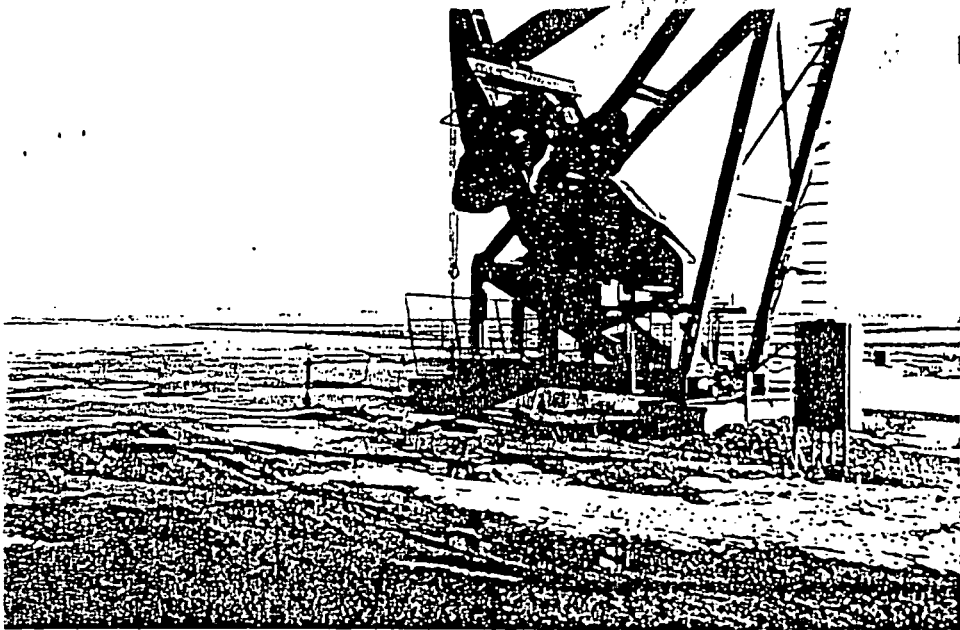


EPU-57

3-12
SW-NE

Poplar
(4)

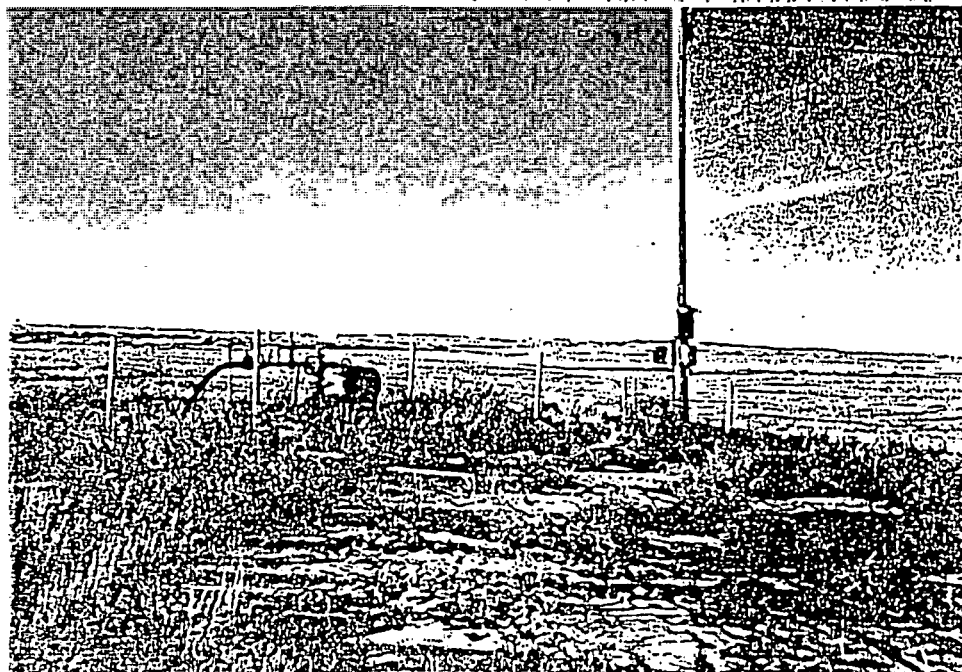




EPU-114

3-13
NW-SE

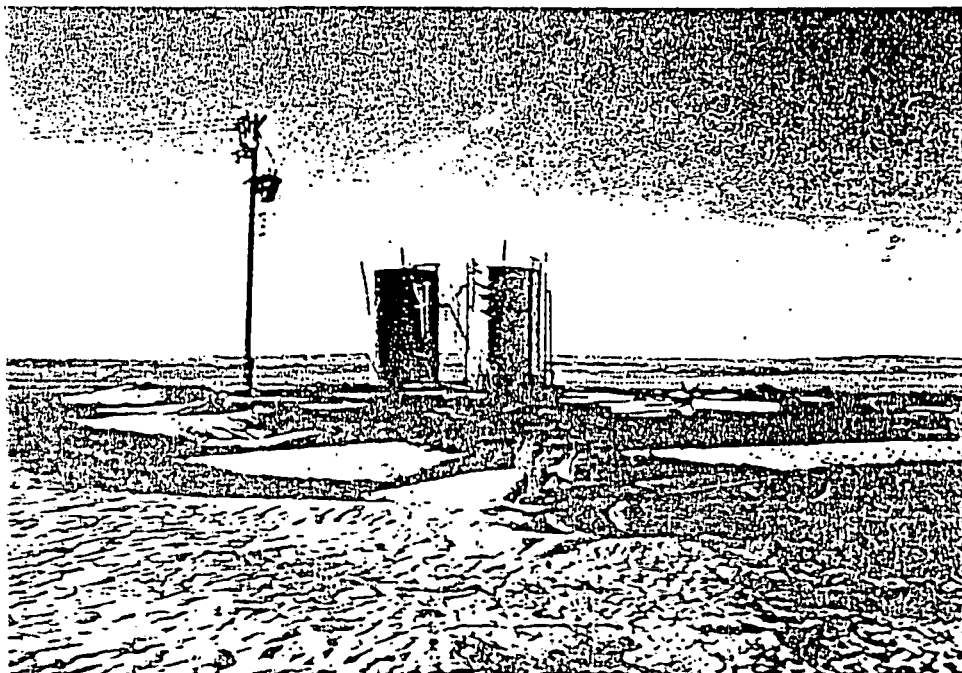
Poplar
(4)



EPU-42

3-14
SW-NE

Poplar
(4)



MURPHY 10420

N-BATTERY
Tanks & Transfer

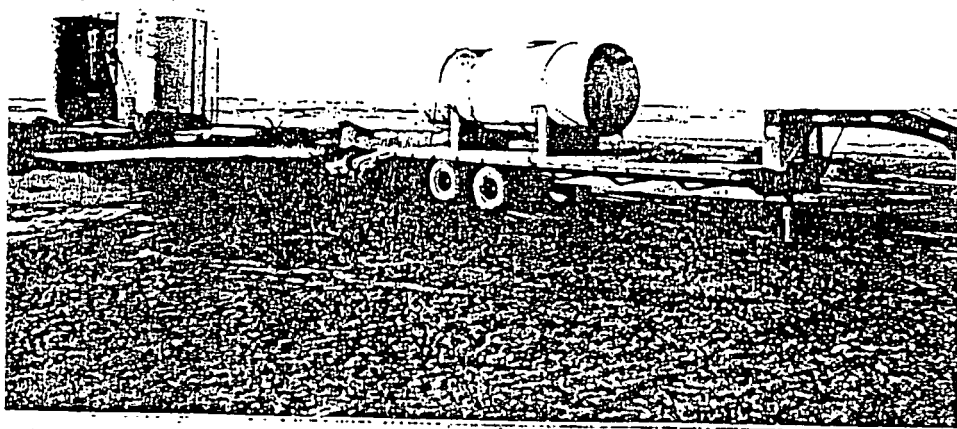
3-15
ESE-WNW

Poplar
(4)

N-BATTERY
Treater

3-16
SE-NW

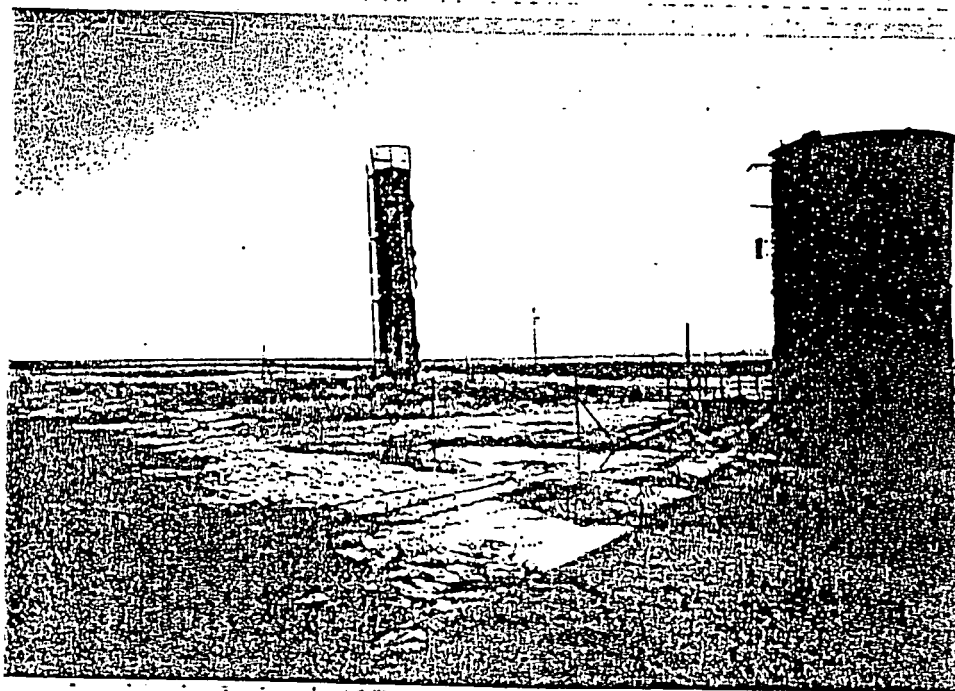
Poplar
(4)



Water - 6
Treater

3-17
NE-SW

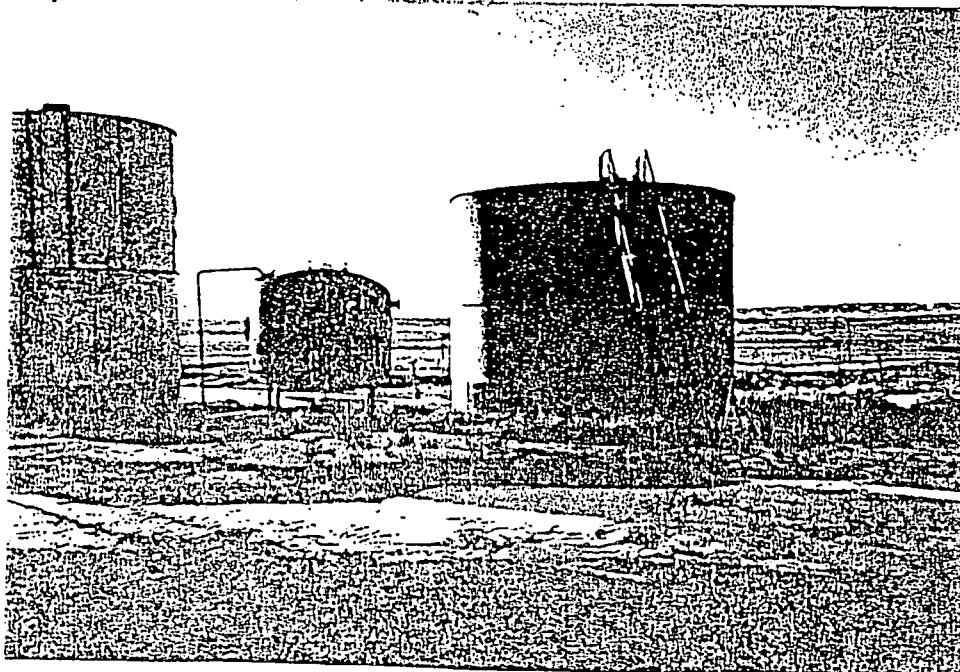
Poplar
(4)



Salt Water - 6
Tanks

3-18
E-W

Poplar
(4)



MURPHY 10421



Salt Water - 6
Salt Water Spill

3-19
SE-NW

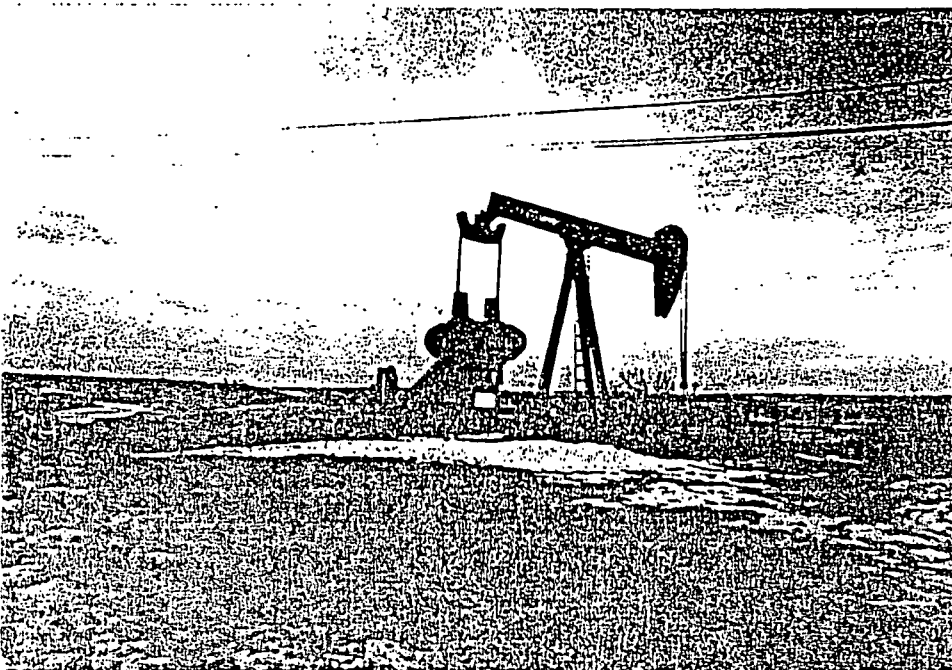
Poplar
(4)



EPU-81

3-20
W-E

Poplar
(4)



MURPHY 10422

EPU-62

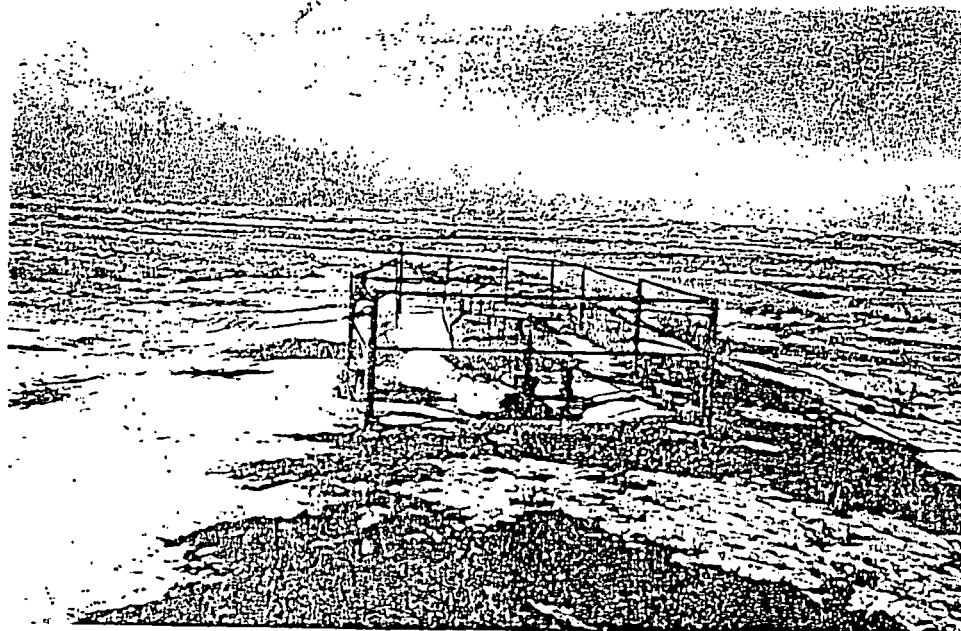
3-21
E-W

Geddart Lake
(1)

EPU-103

3-22
E-W

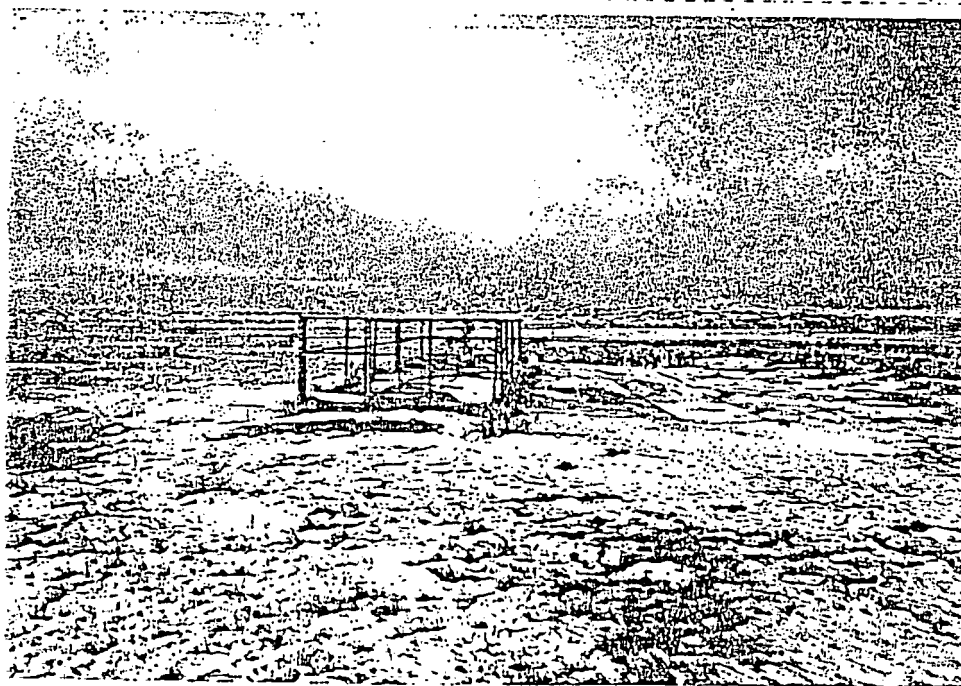
Poplar
(4)



EPU-47

3-23
E-W

Poplar
(4)

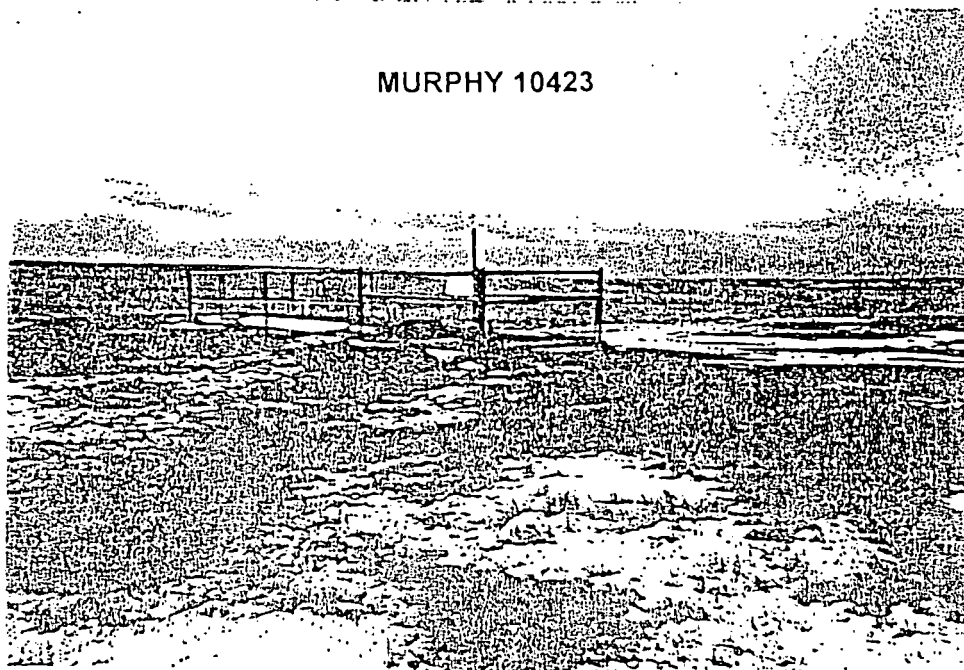


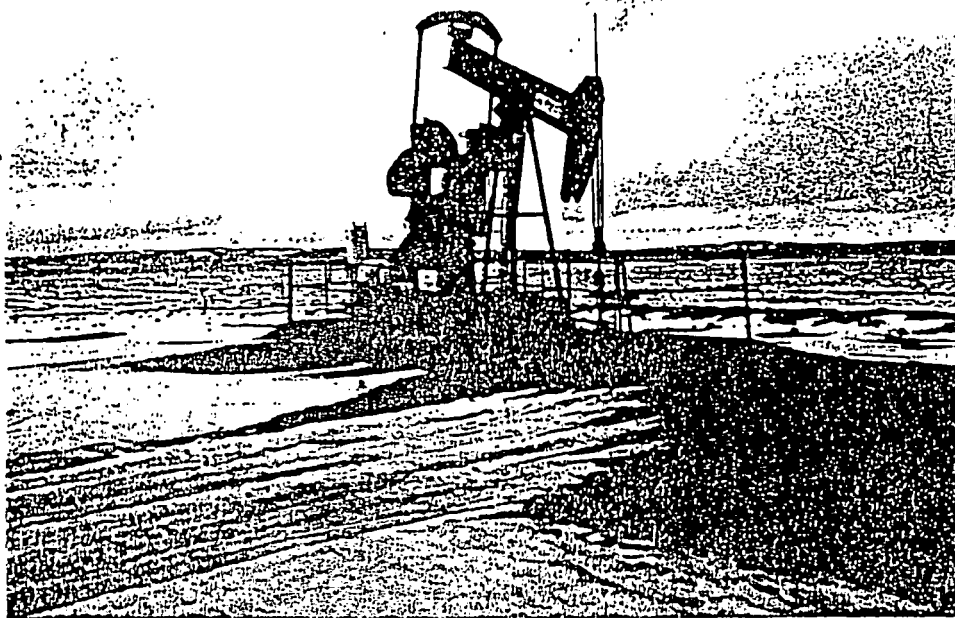
MURPHY 10423

EPU-79

3-24
NE-SW

Poplar
(4)





EPU-97

3-25
SE-NW

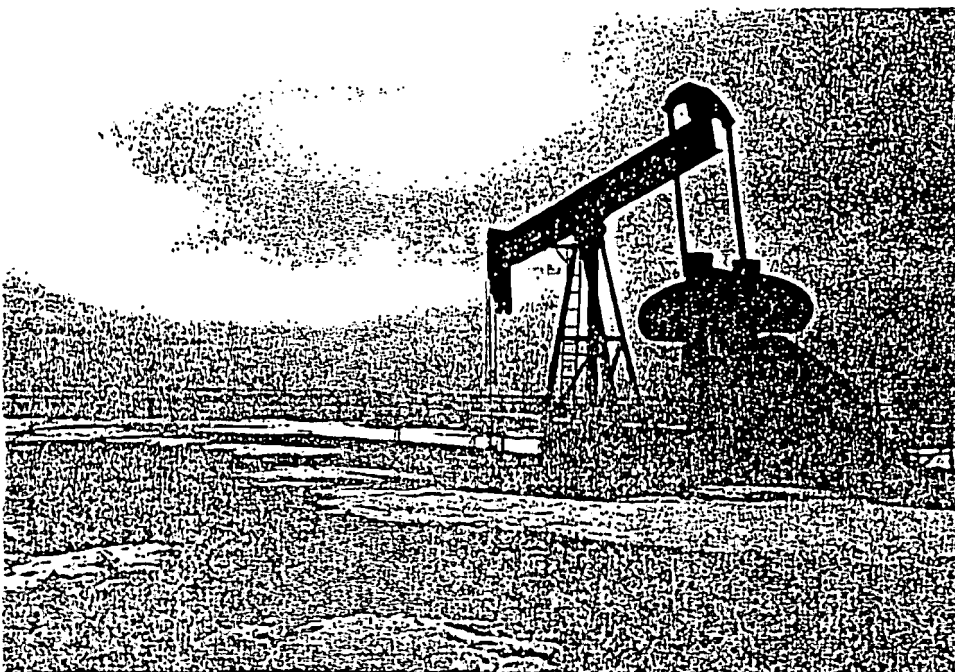
Poplar
(4)



EPU-96

3-26
WSW-ENE

Poplar
(4)



MURPHY 10424

EPU-110

3-27
NE-SW

Poplar
(4)

J-Battery
West of EPU-110

4-1
S-N

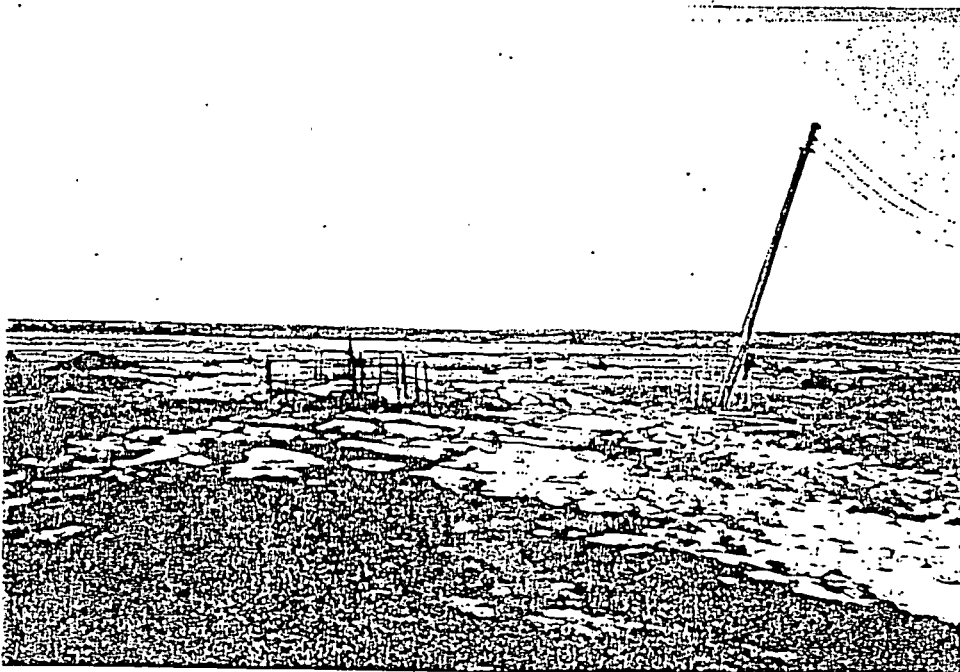
Poplar
(4)



EPU-21

4-2
W-E

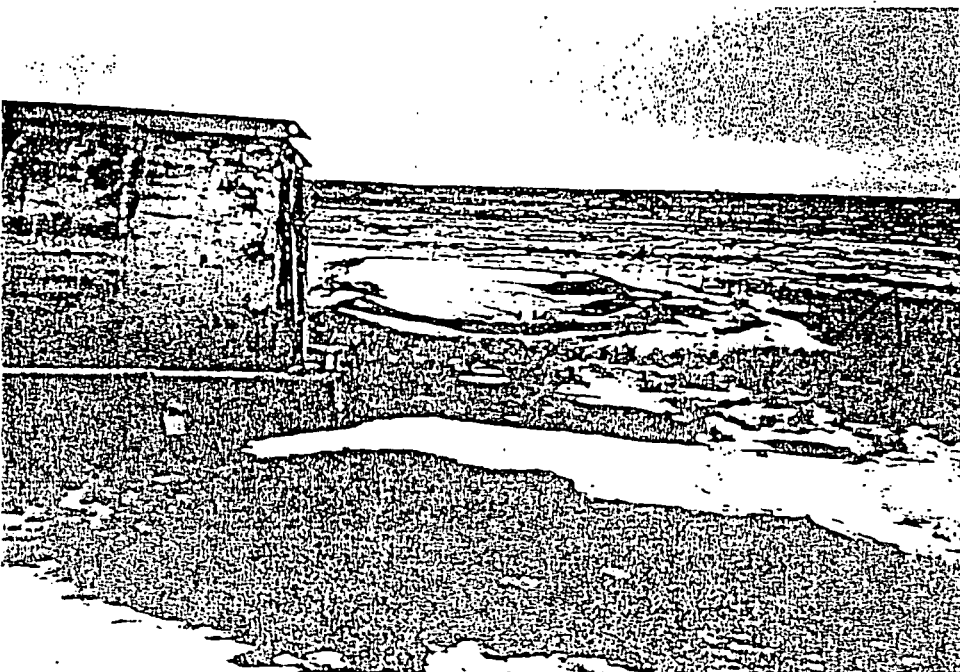
Poplar
(4)



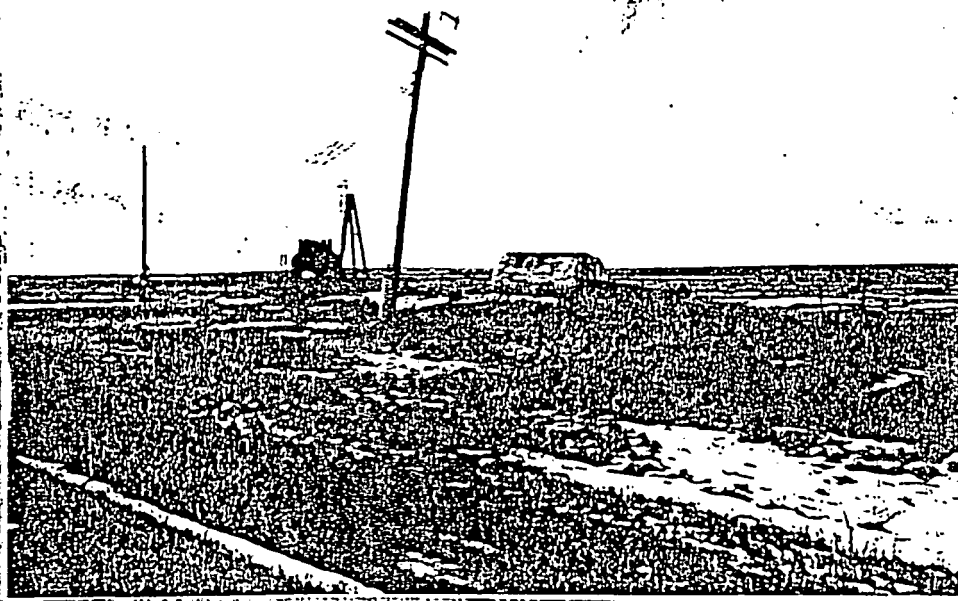
EPU-60
Frac tank & pit

4-3
W-E

Poplar
(4)



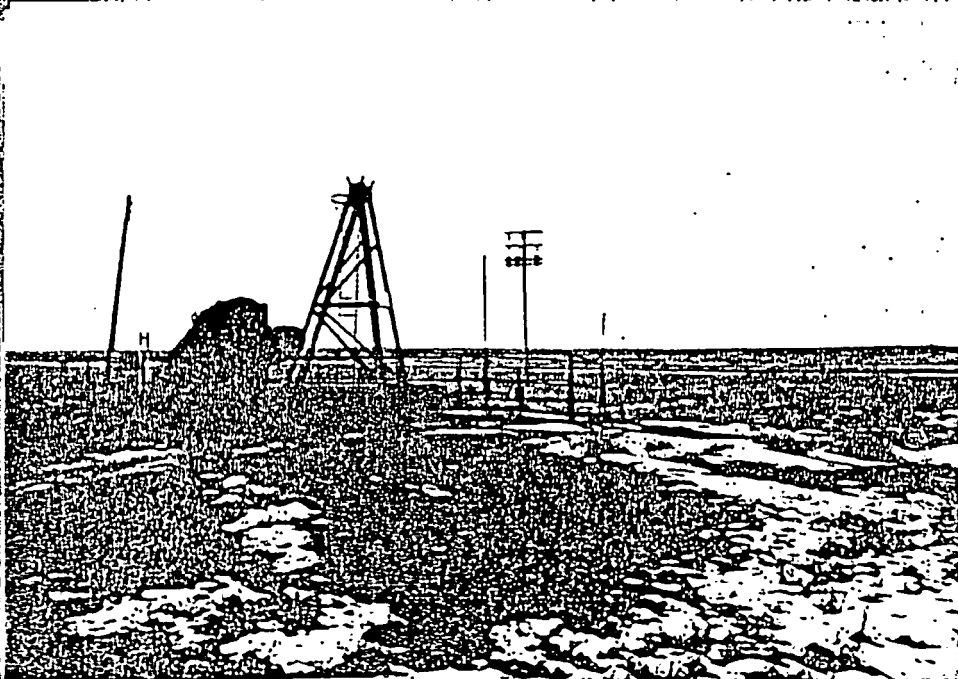
MURPHY 10425



EPU-60
Well

4-4
SW-NE

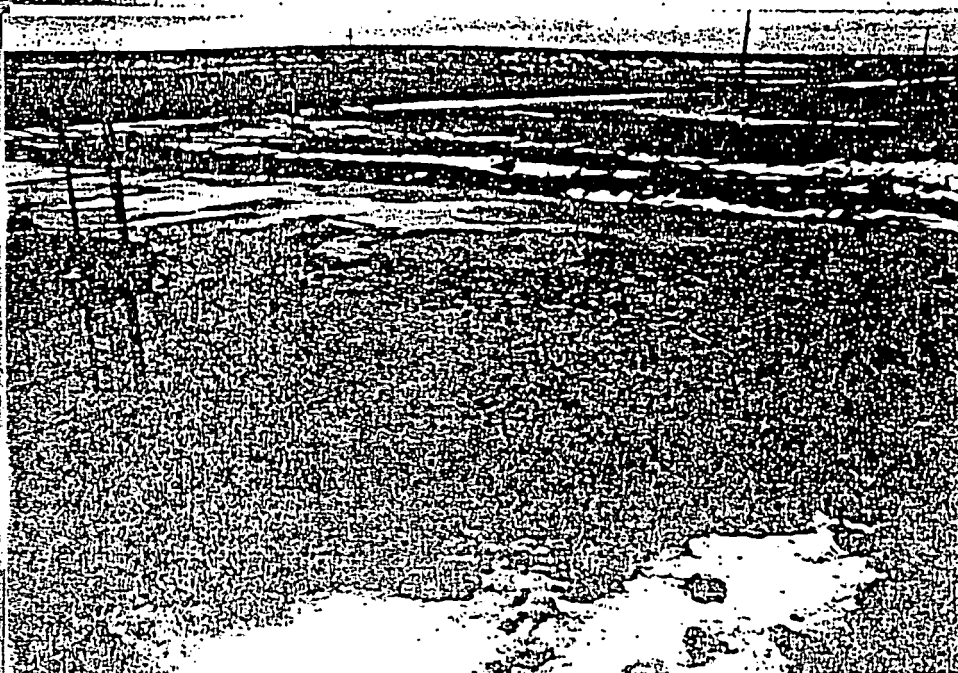
Poplar
(4)



EPU-106

4-5
W-E

Badger Creek
(3)



MURPHY 10426

EPU-31
Oil Spill

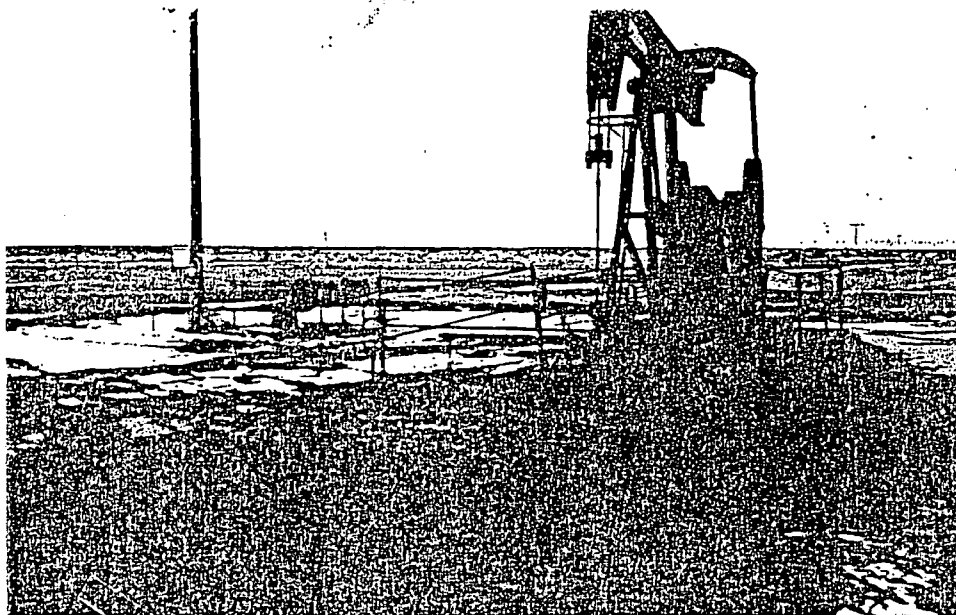
4-6
NW-SE

Badger Creek
(3)

EPU-31
Well

4-7
NW-SE

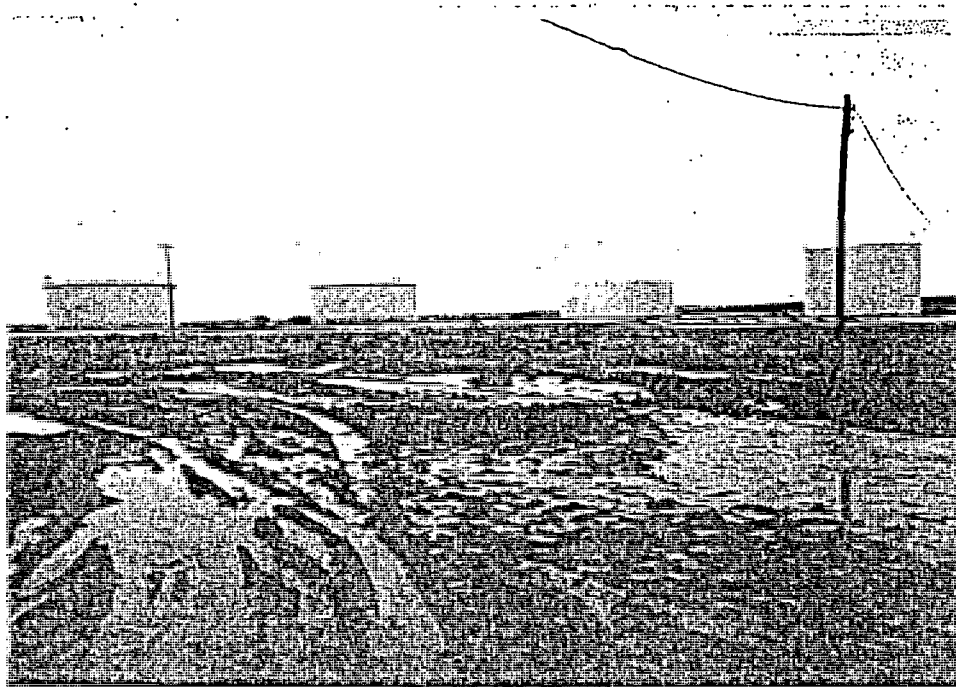
Badger Creek
(3)



N Central Bat.
Drums & Junk

4-8
SSW-NNE

Badger Creek
(3)

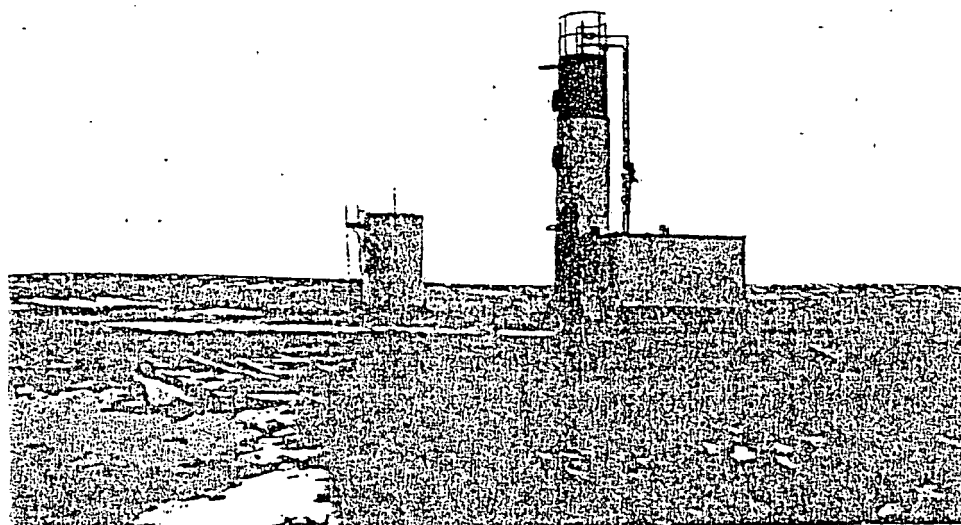


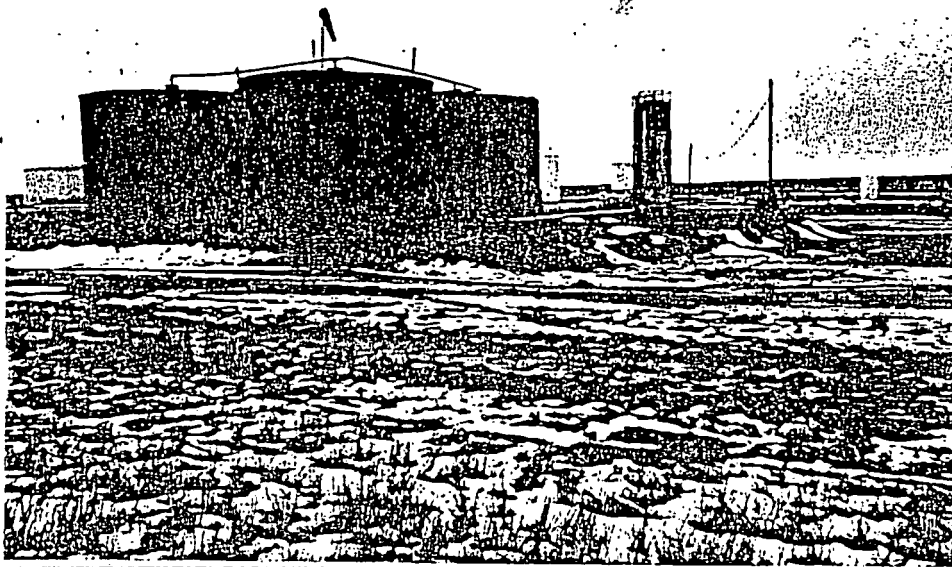
MURPHY 10427

N Central Bat.
Old Battery

4-9
ESE-WNW

Badger Creek
(3)

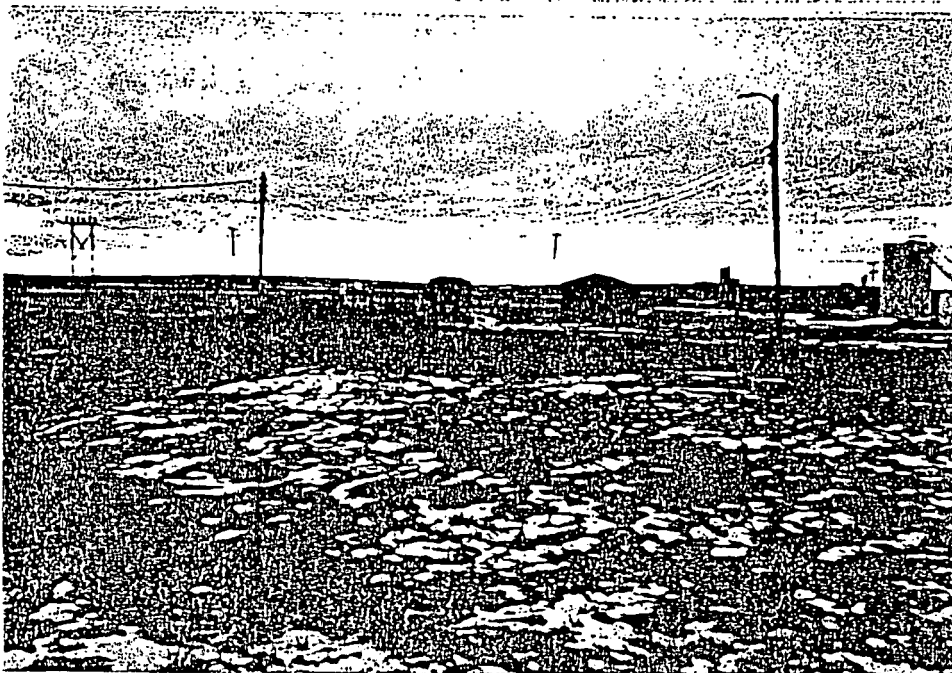




N Central Bat.
New Tanks

4-10
SE-NW

Badger Creek
(3)



Crude Custody
Transfer Station

4-11
E-W

Badger Creek
(3)



MURPHY 10428

NC SW Disp.
Pit

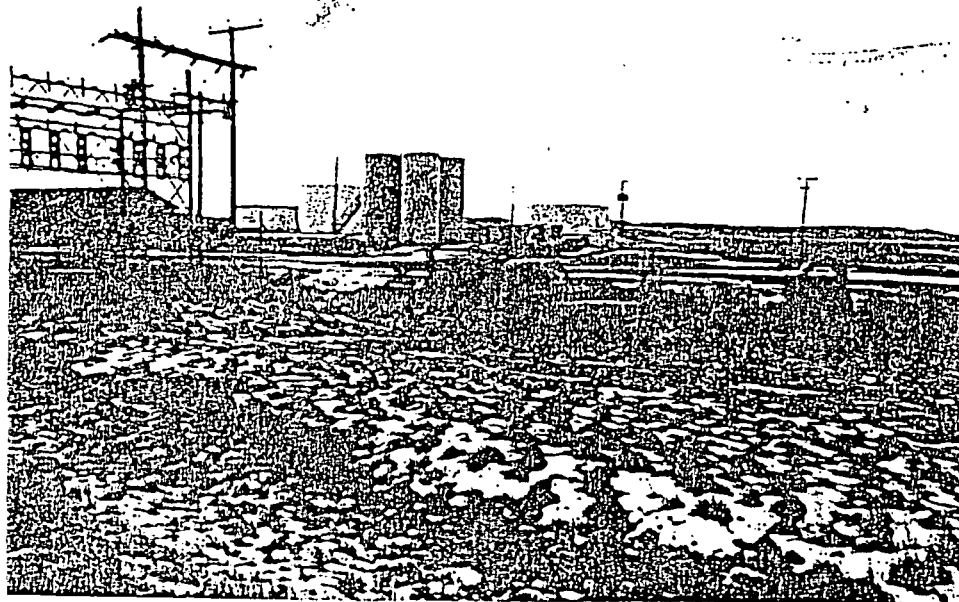
4-12
S-N

Badger Creek
(3)

NC SW Disp.
Tanks & EPU-1D

4-13
SE-NW

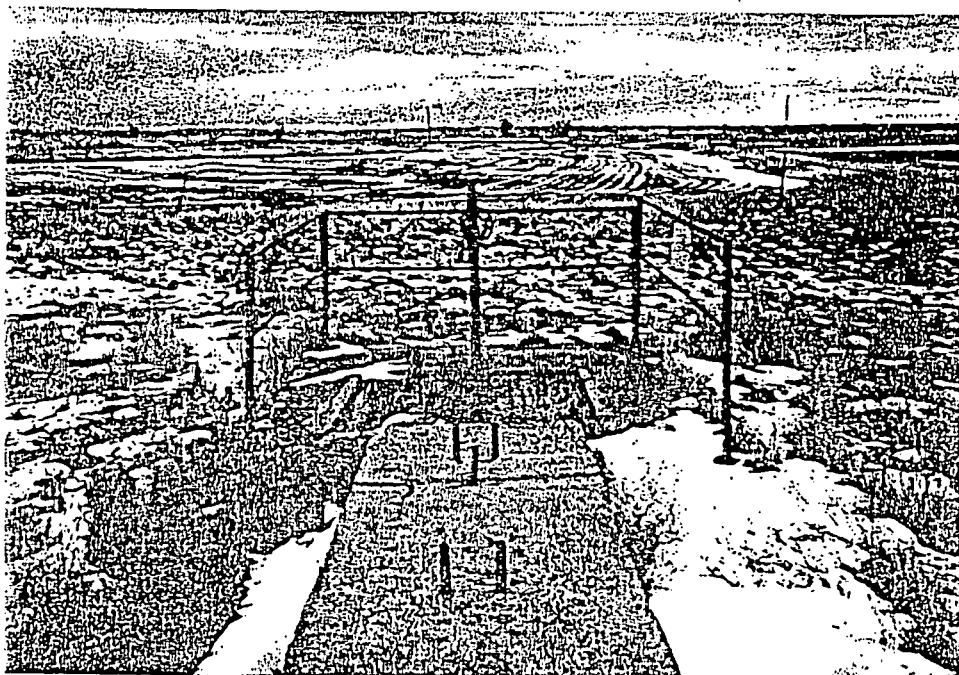
Badger Creek
(3)



EPU-78

4-14
N-S

Poplar
(4)

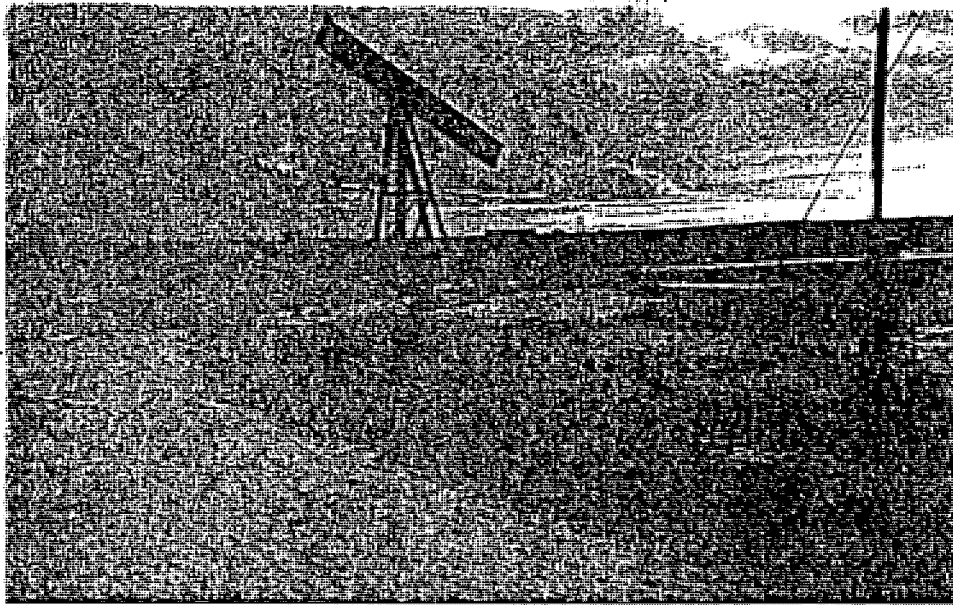


EPU-36

4-15
NE-SW

Poplar
(4)

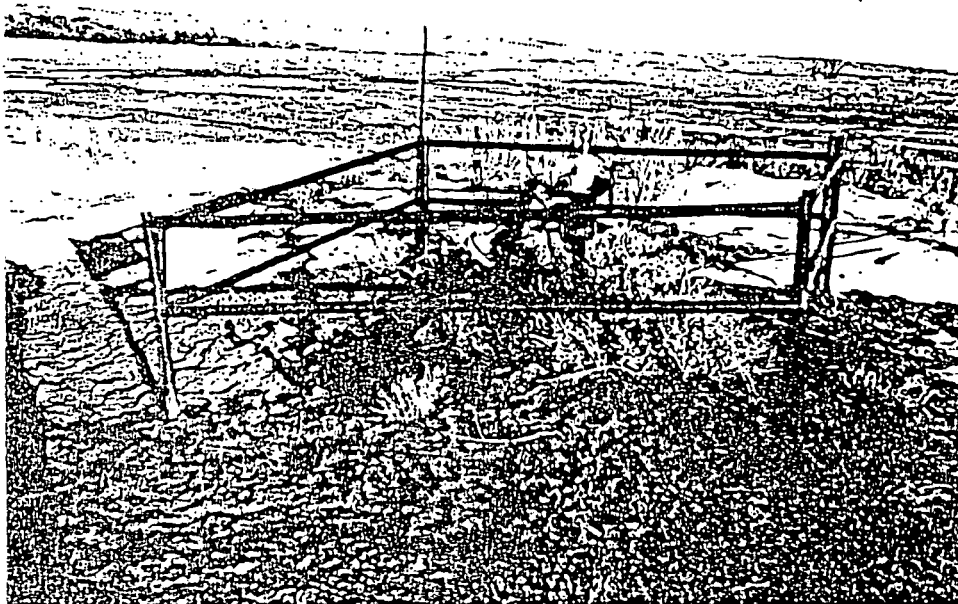




EPU-69

4-16
NE-SW

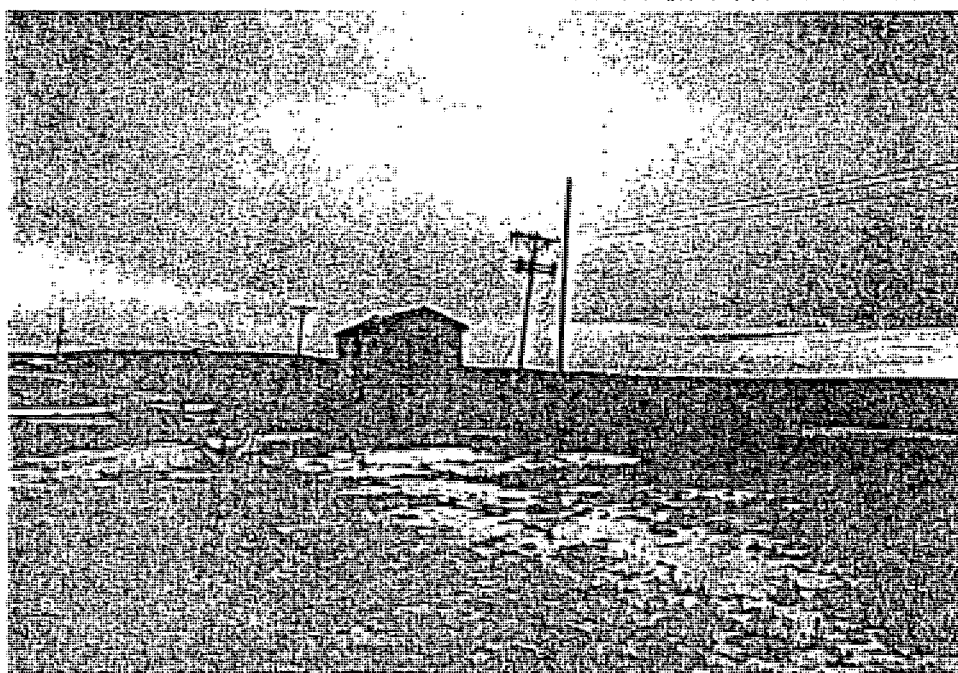
Badger Creek
(3)



EPU-102

4-17
S-N

Badger Creek
(3)



MURPHY 10430

E-Battery
Treater

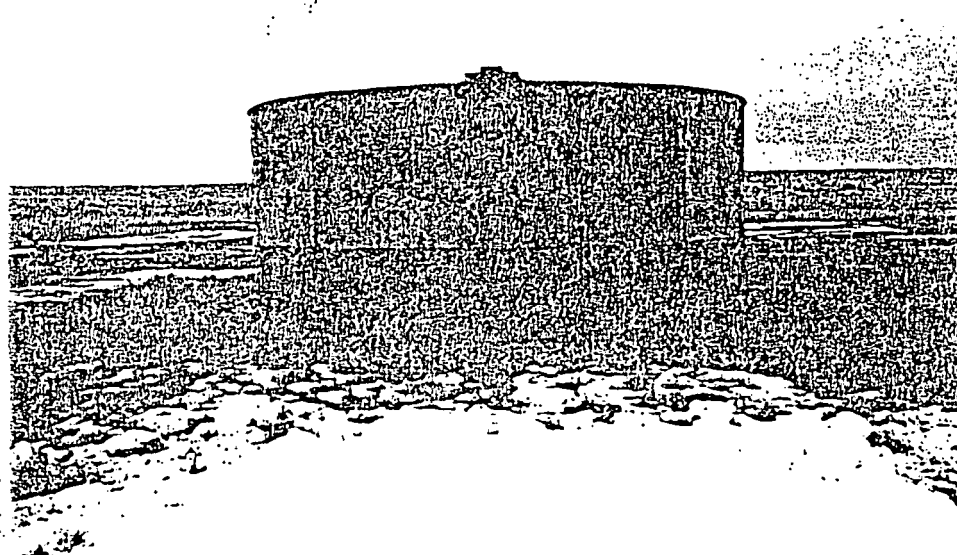
4-18
SSW-NNE

Badger Creek
(3)

E-Battery
Tank

4-19
SW-NE

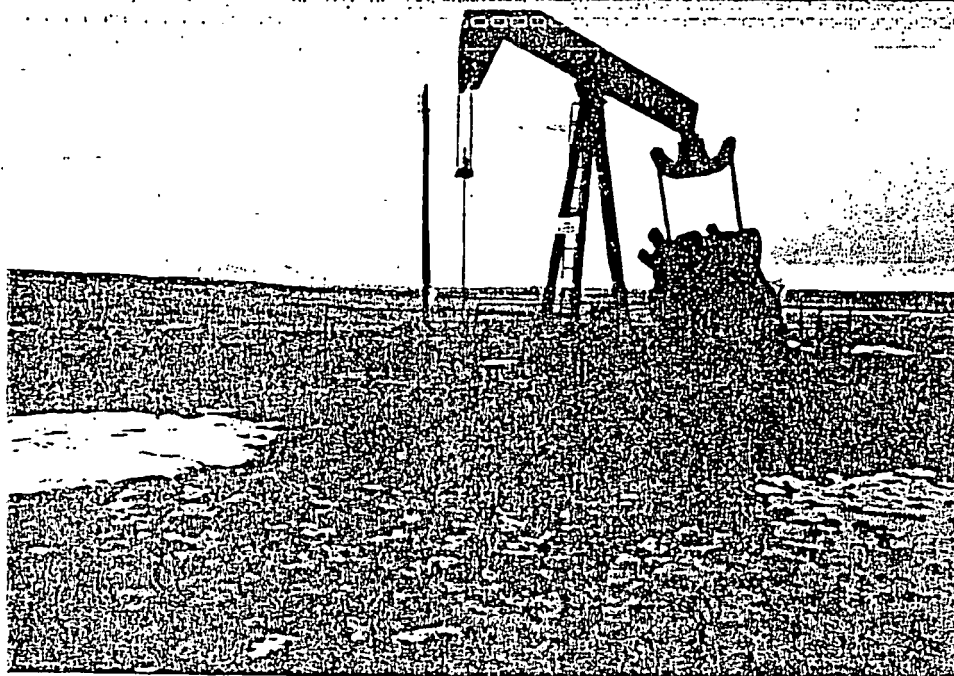
Badger Creek
(3)



EPU-70

4-20
SW-NE

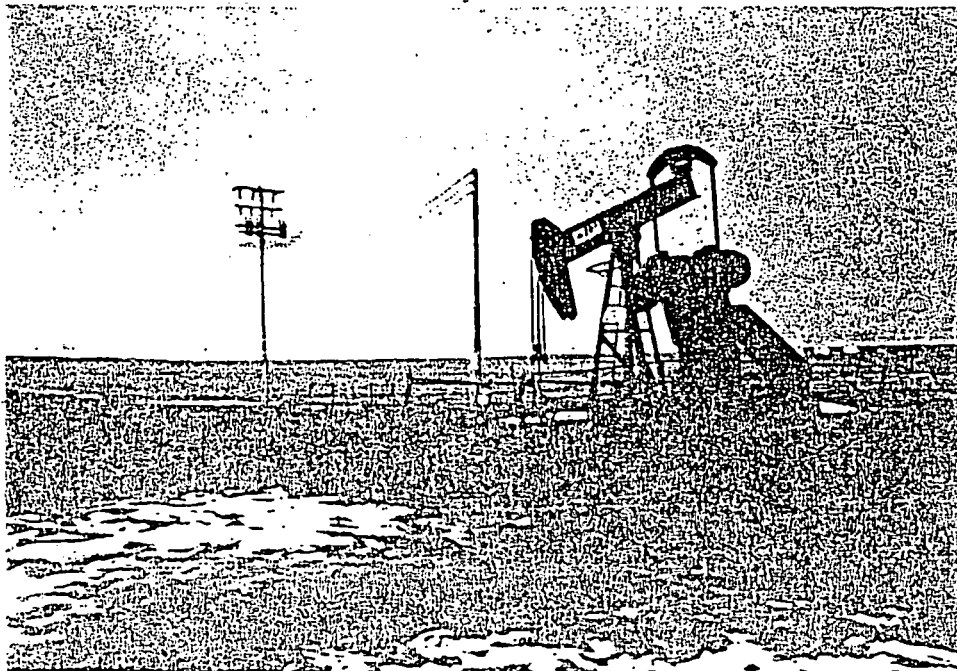
Badger Creek
(3)

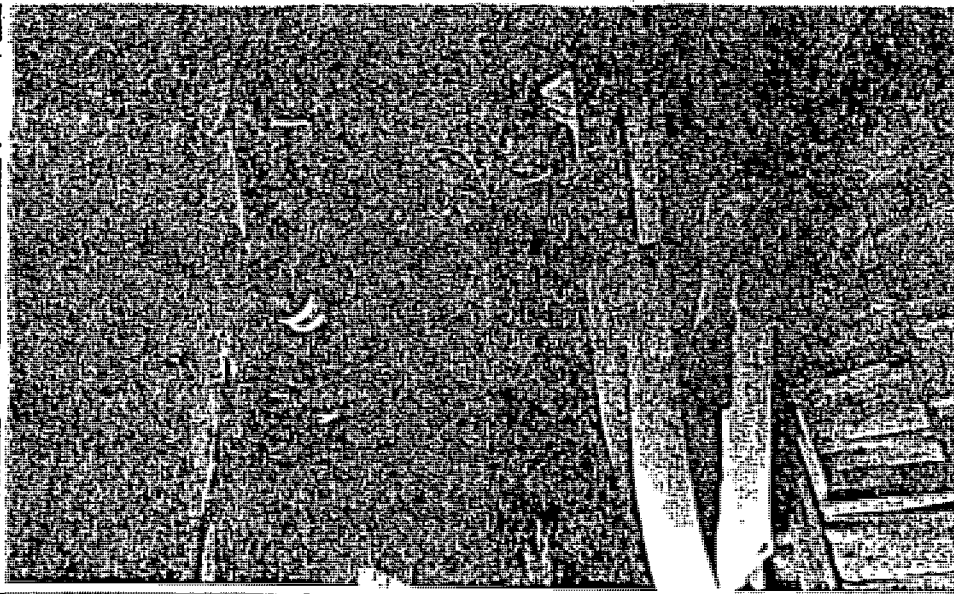


EPU-77

4-21
SW-NE

Badger Creek
(3)

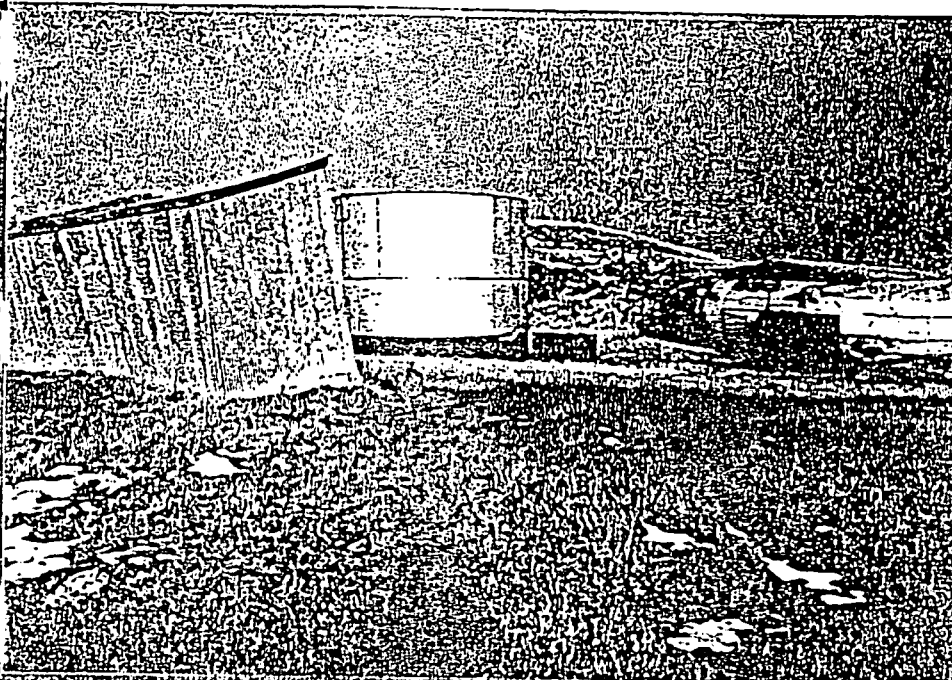




EPU-46
Well

4-22
E-W

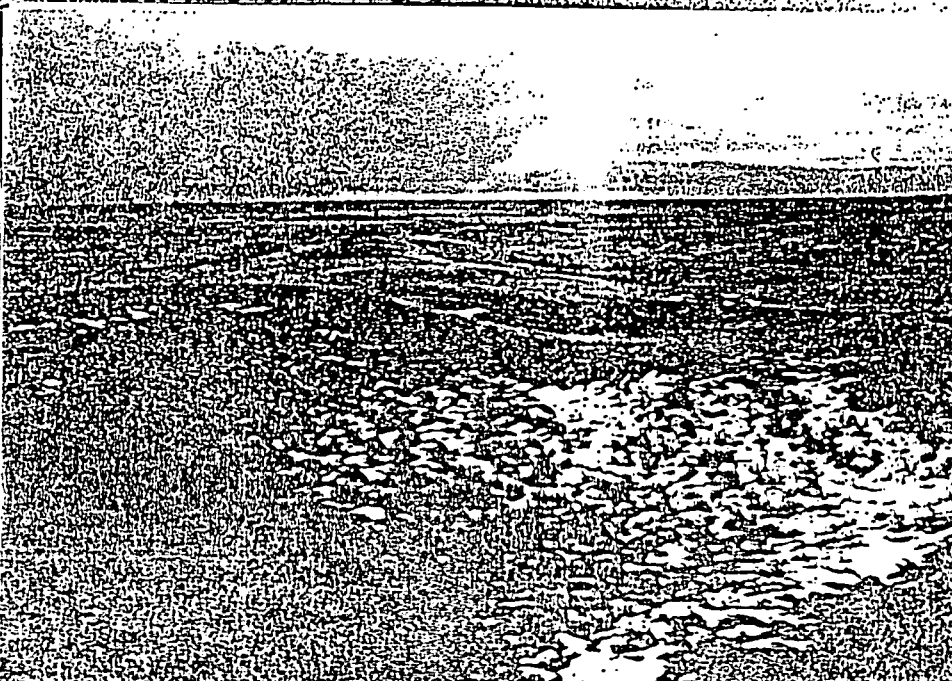
Badger Creek
(3)



EPU-46
Location

4-23
SSE-NNW

Badger Creek
(3)



MURPHY 10432

EPU-46
Reserve Pit

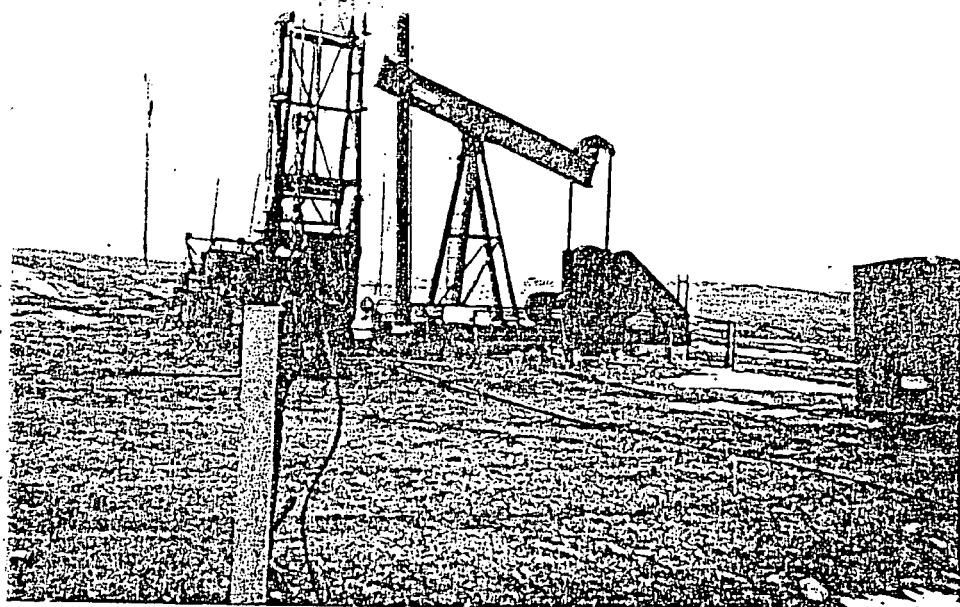
4-24
NW-SE

Badger Creek
(3)

EPU-10

4-25
E-W

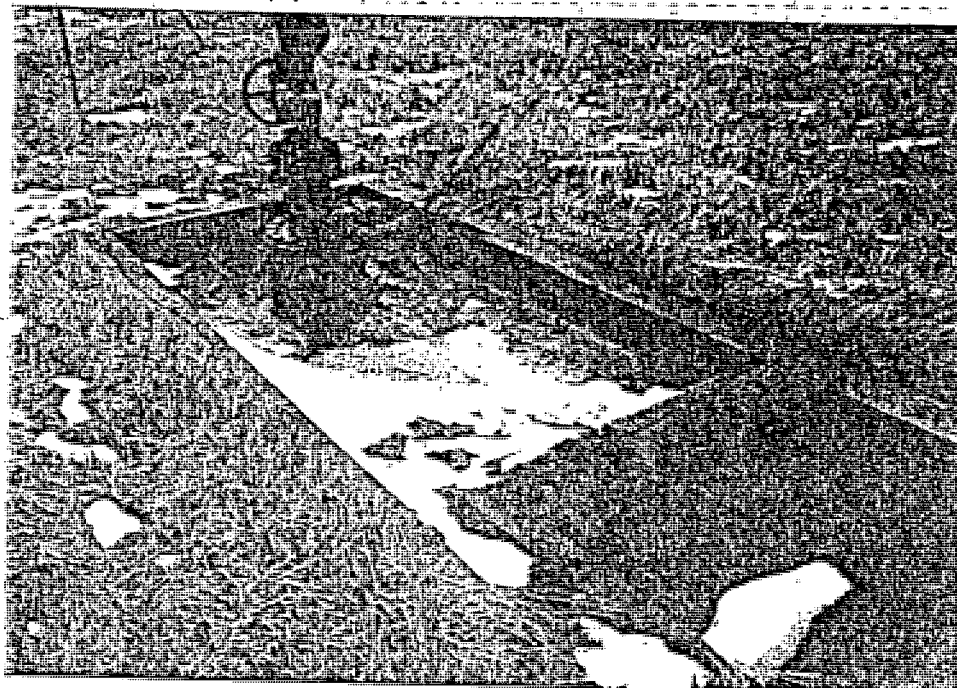
Badger Creek
(3)



EPU-23

4-26
SE-NW

Badger Creek
(3)

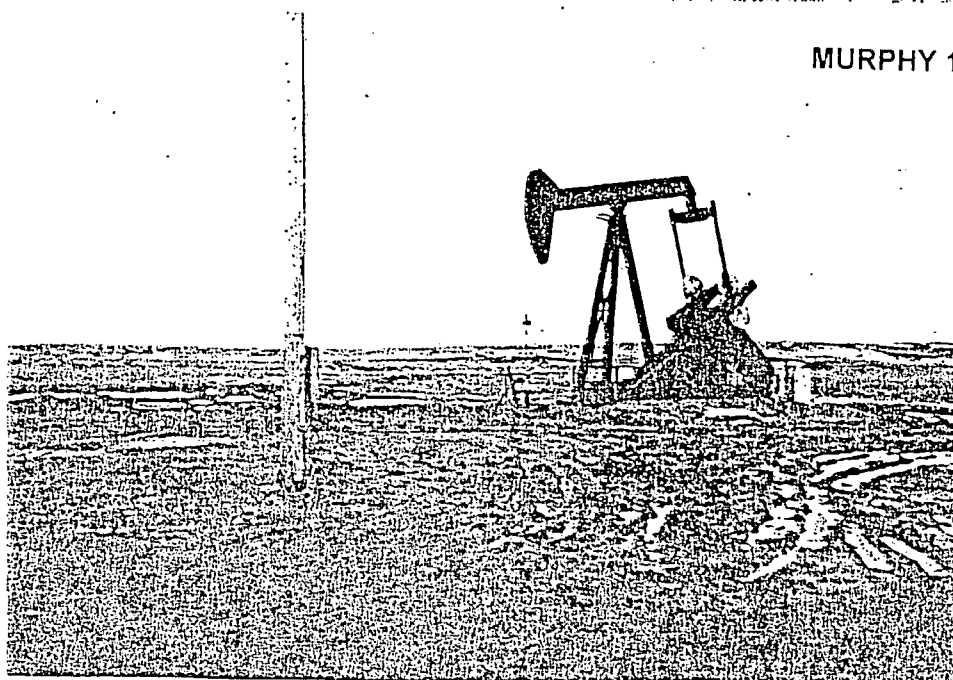


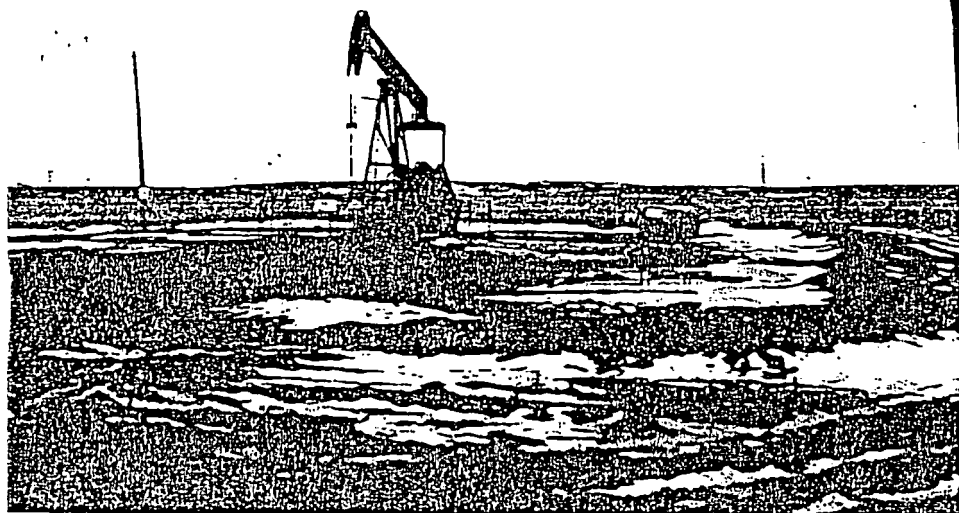
MURPHY 10433

EPU-112

4-27
NE-SW

Badger Creek
(3)

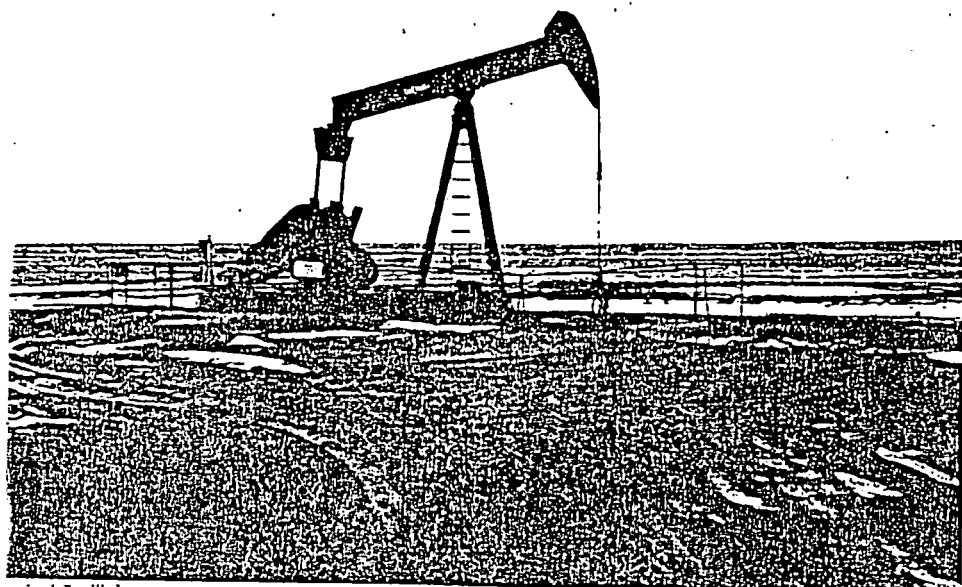




EPU-56

5-1
ENE-WSW

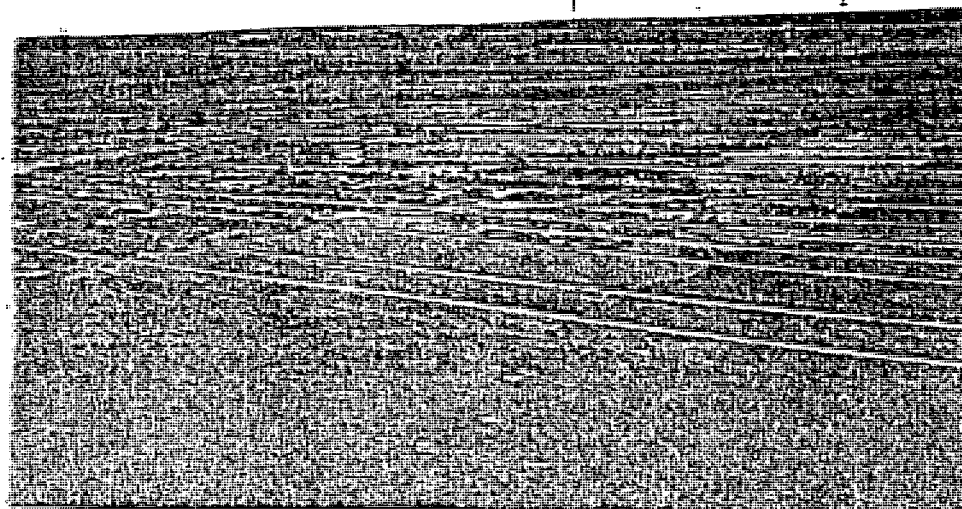
Badger Creek
(3)



EPU-105

5-2
W-E

Badger Creek
(3)



MURPHY 10434

Saltwater Disp#5
Pit & Extra Berm

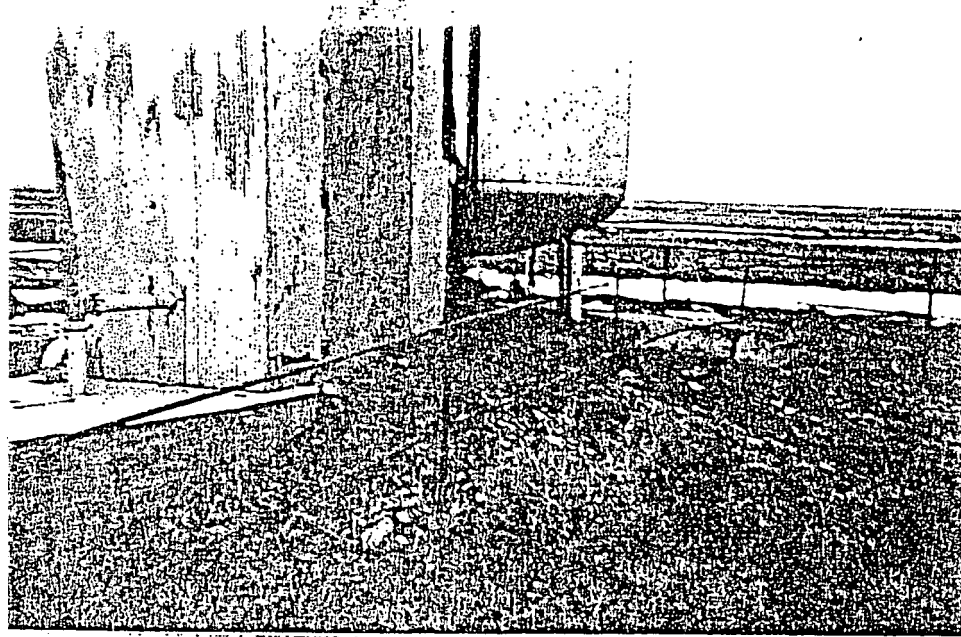
5-3
SW-NE

Badger Creek
(3)

Saltwater Disp#5
Pretreat

5-4
SW-NE

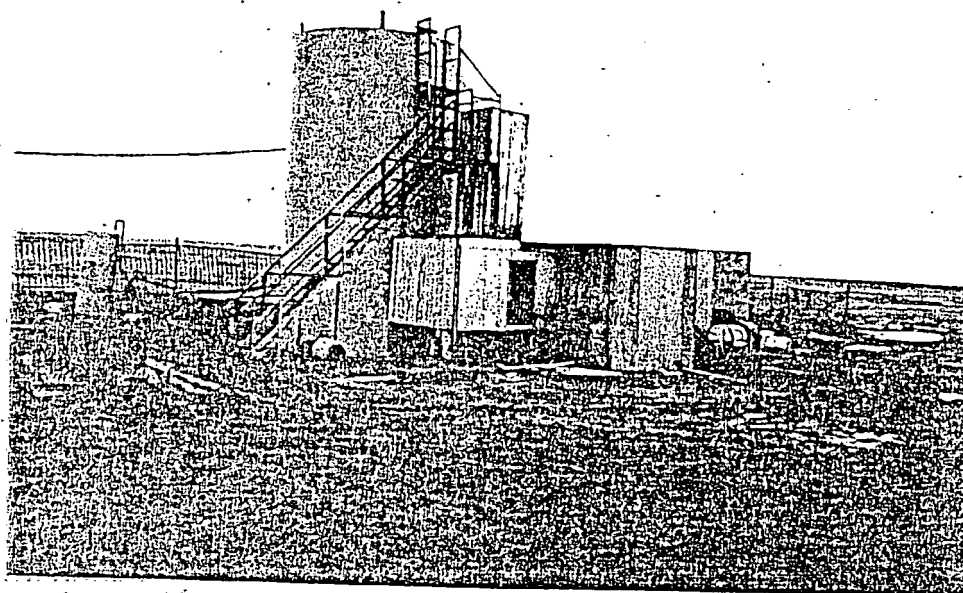
Badger Creek
(3)



Saltwater Disp#5
Battery

5-5
NW-SE

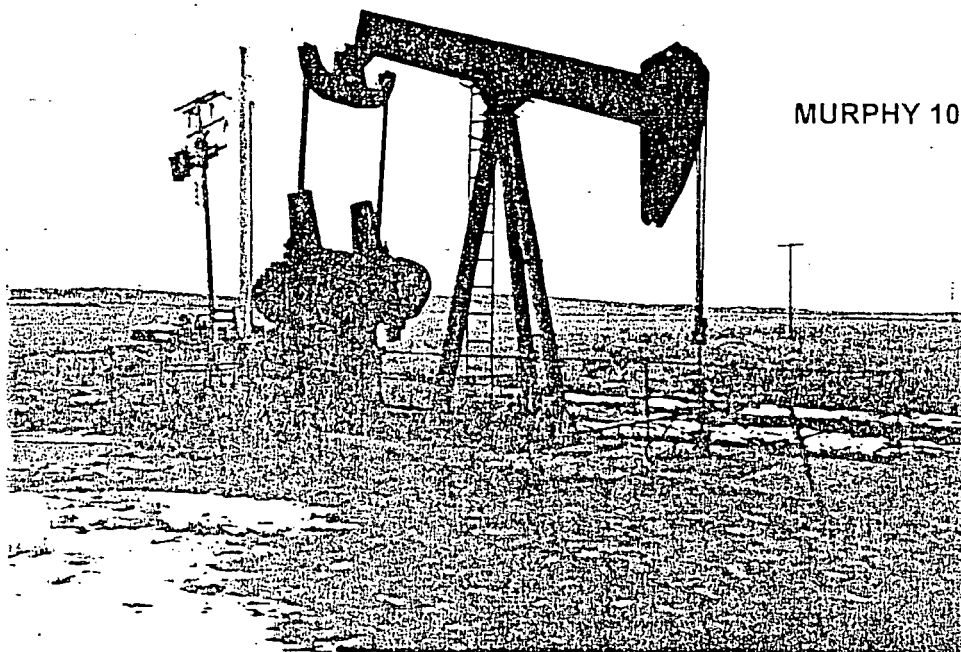
Badger Creek
(3)

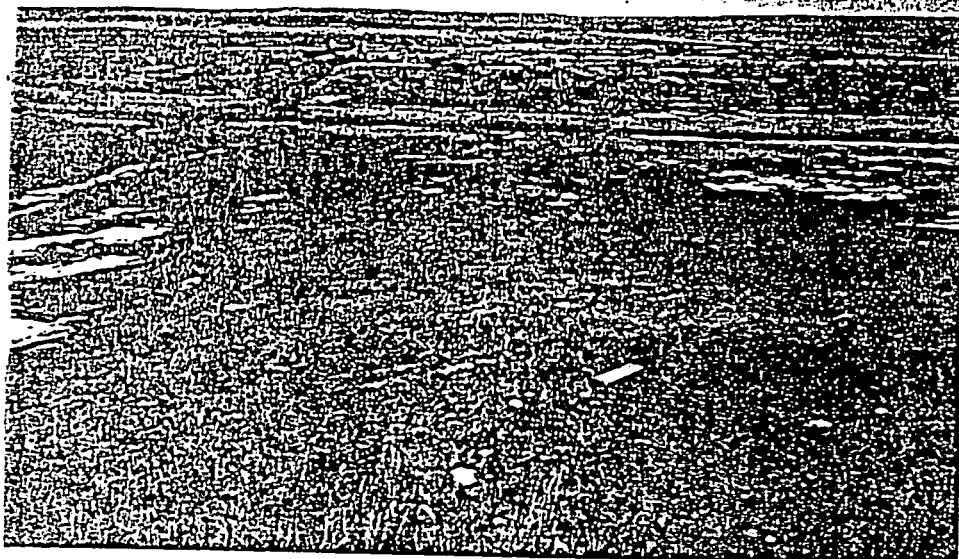


EPU-107

5-6
WSW-ENE

Long Cr. East
(2)

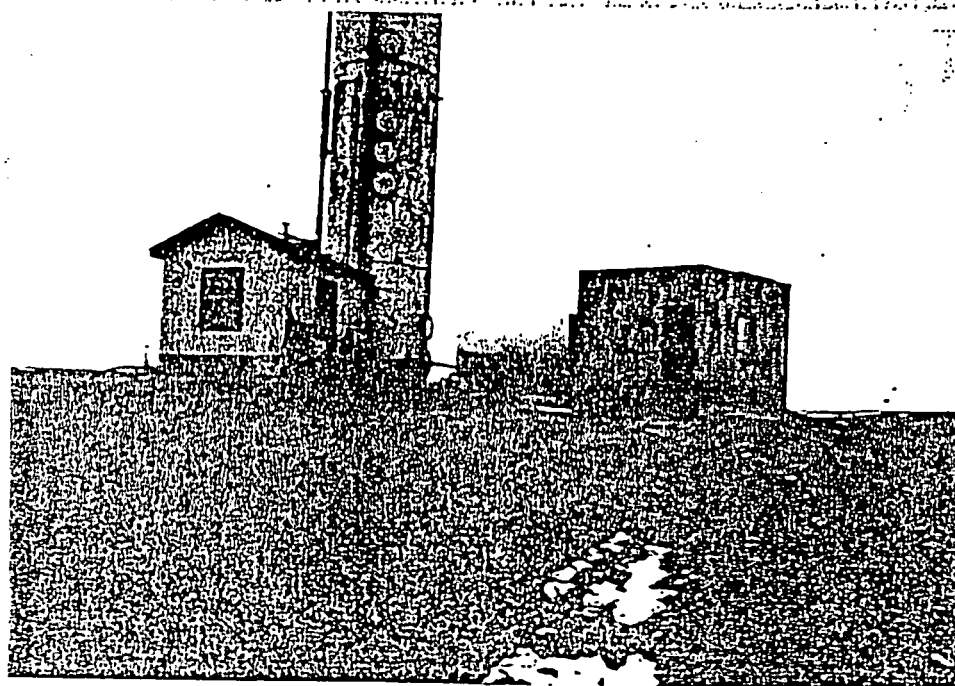




I-Battery
Amended Soil

5-7
W-E

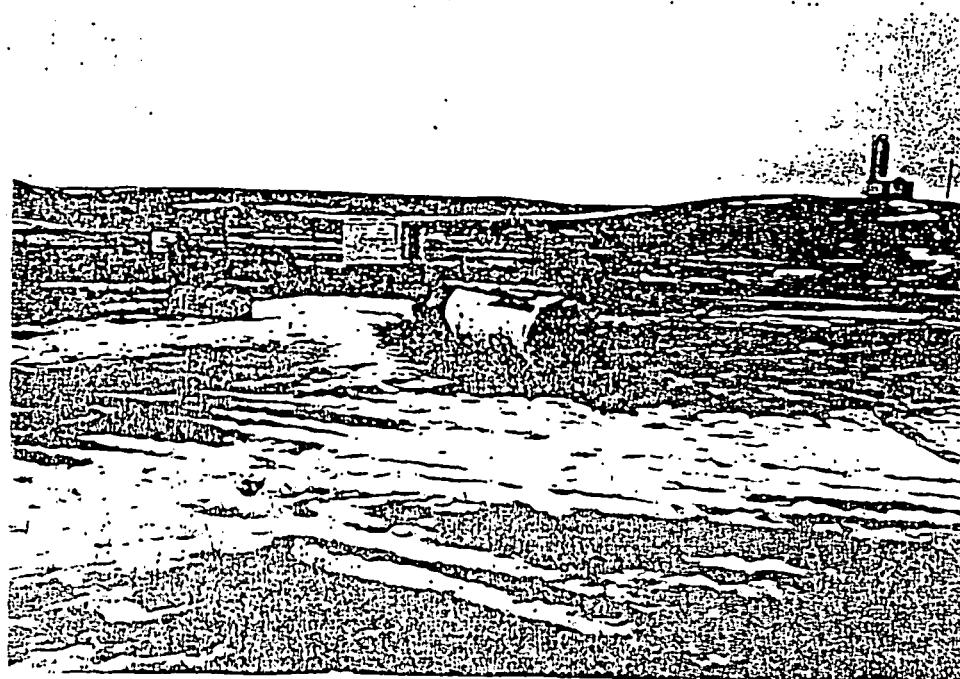
Badger Creek
(3)



I-BATTERY
Battery

5-8
SE-NW

Badger Creek
(3)



MURPHY 10436

EPU-19
EPU-4G

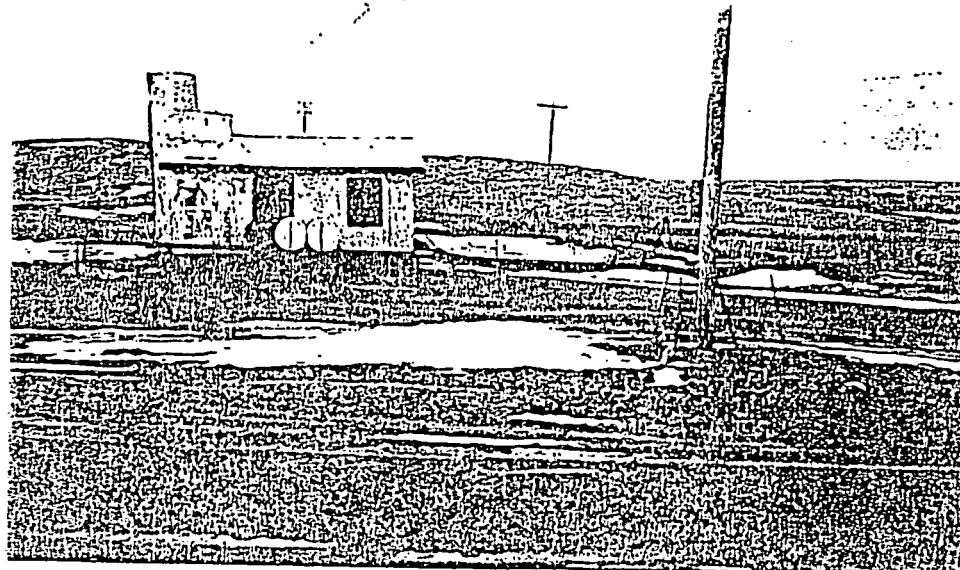
5-9
SE-NW

Badger Creek
(3)

Salt Water Disp. 5
Equipment & Pit

5-10
SSW-NNE

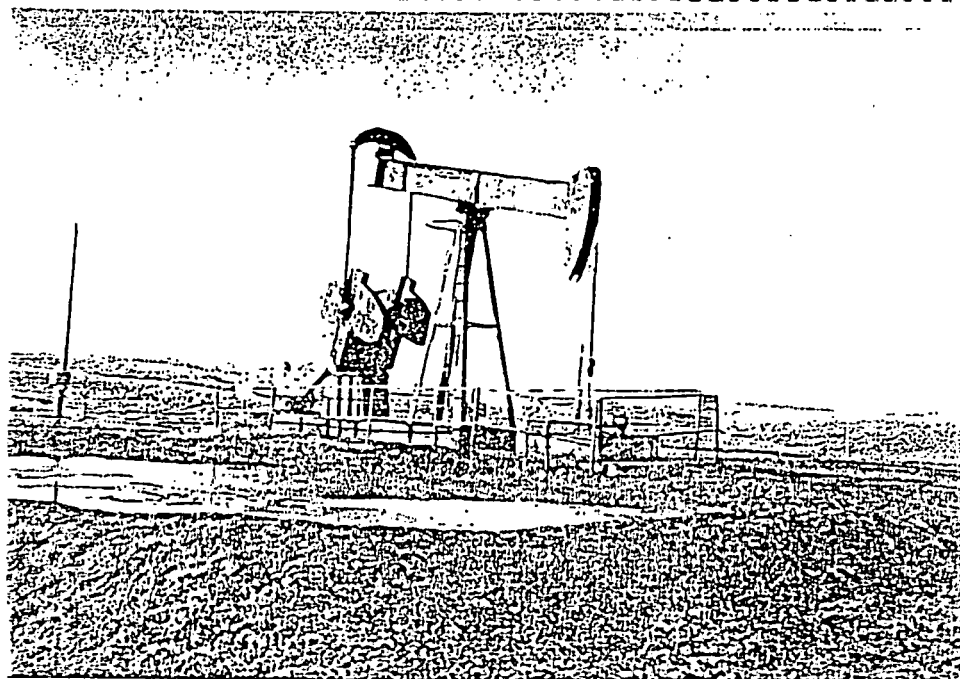
Badger Creek
(3)



EPU-27

5-11
SE-NW

Long Creek East
(2)

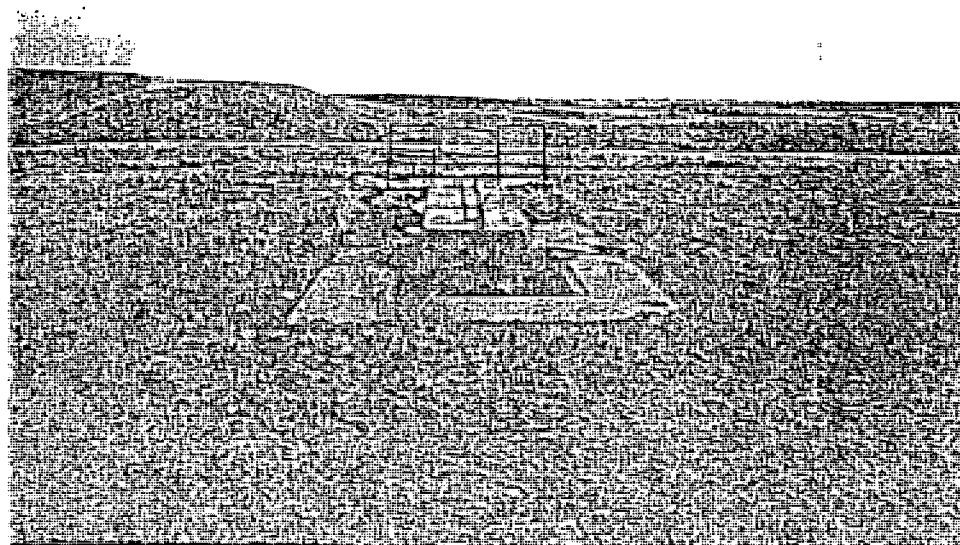


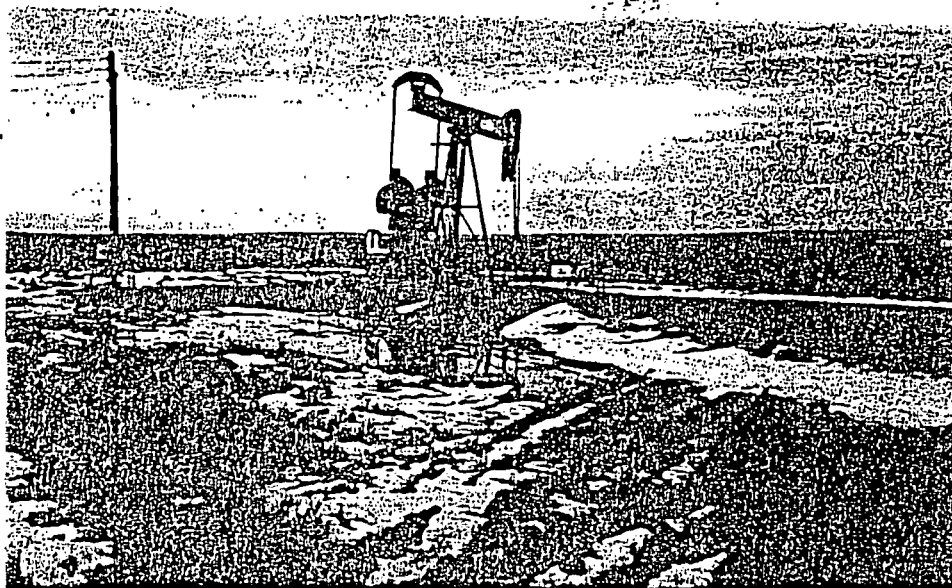
MURPHY 10437

EPU-93

5-12
N-S

Long Creek East
(2)

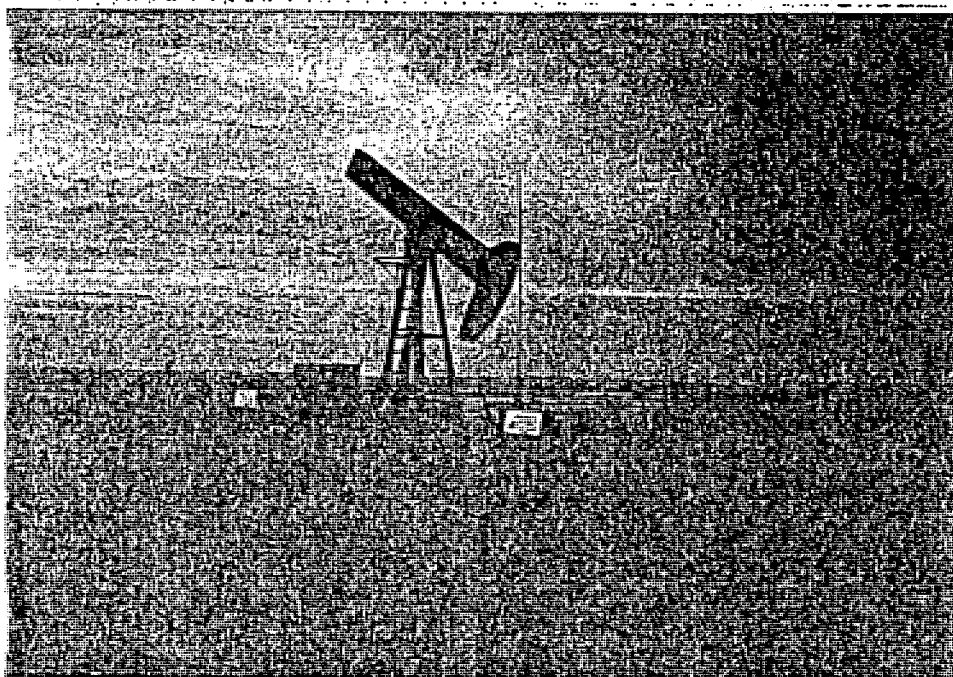




EPU-84

5-13
SW-NE

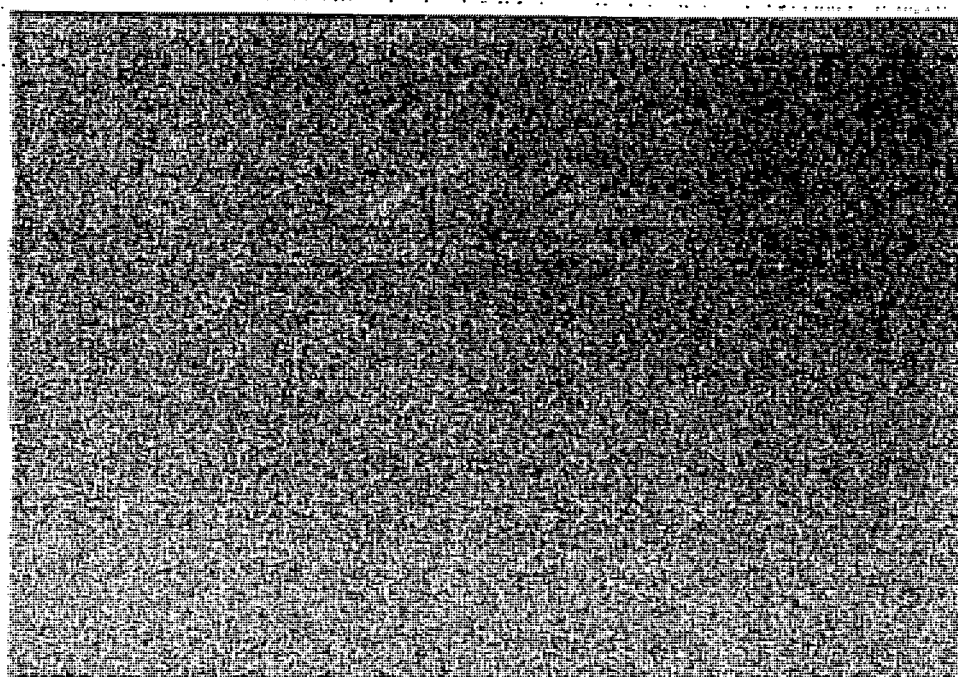
Geddart Lake
(1)



EPU-91

5-14
SW-NE

Geddart Lake
(1)



MURPHY 10438

EPU-34

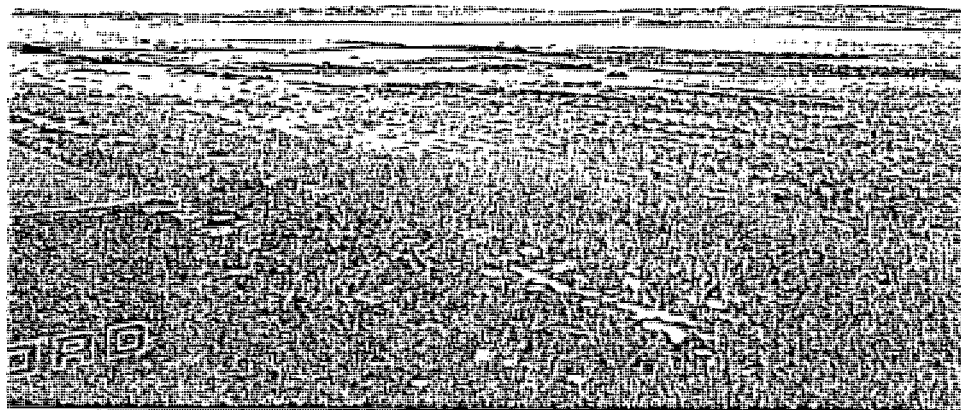
5-15
W-E

Geddart Lake
(1)

M-Battery

6-1
SE-NW

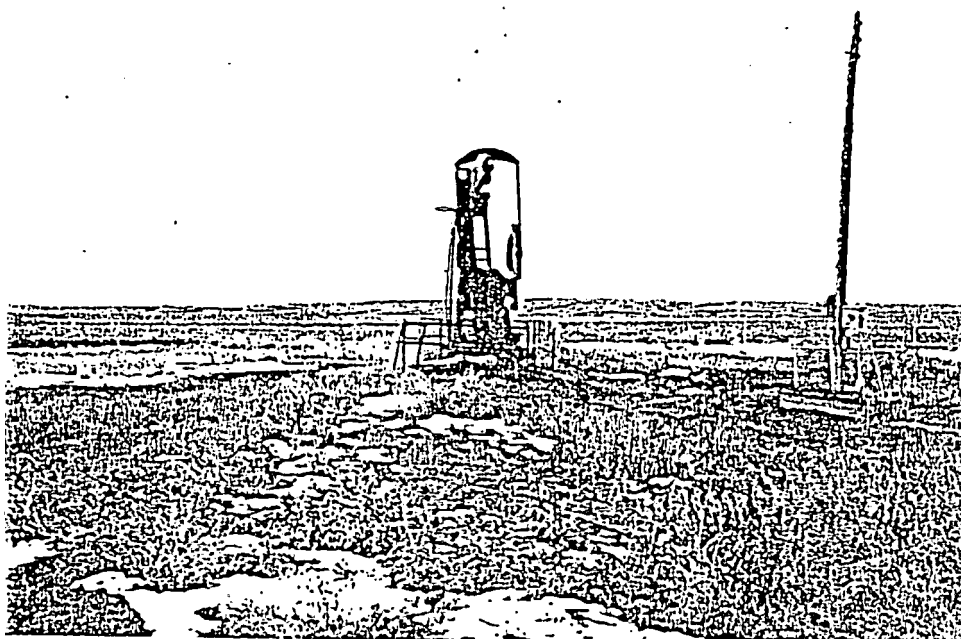
Geddart Lake
(1)



EPU-90

6-2
E-W

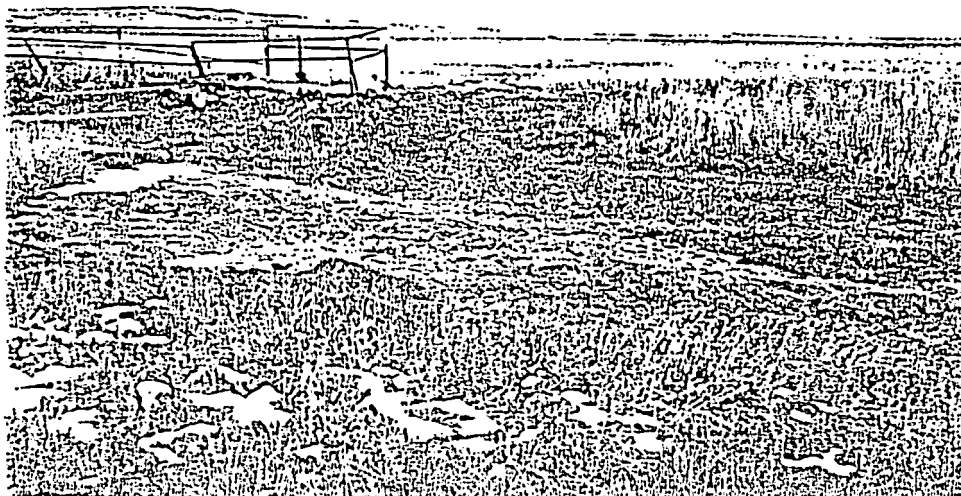
Geddart Lake
(1)

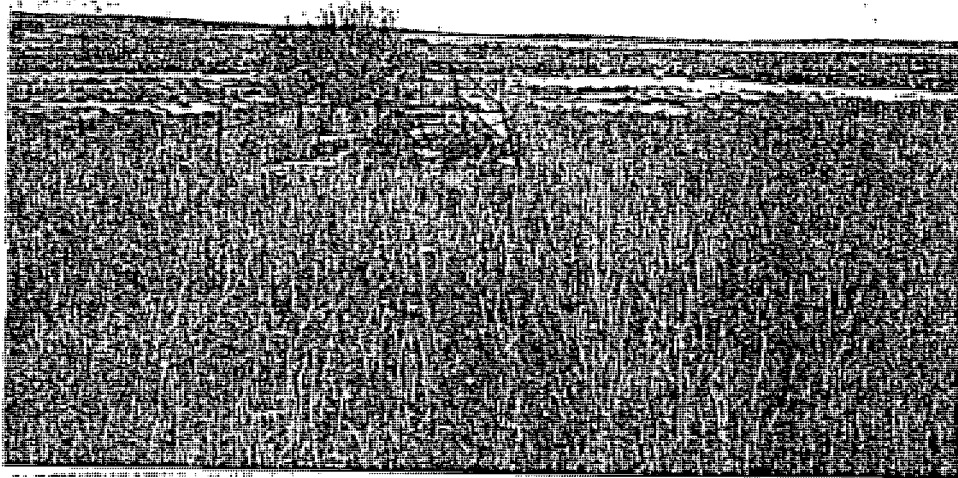


EPU-98

6-3
SSE-NNW

Geddart Lake
(1)

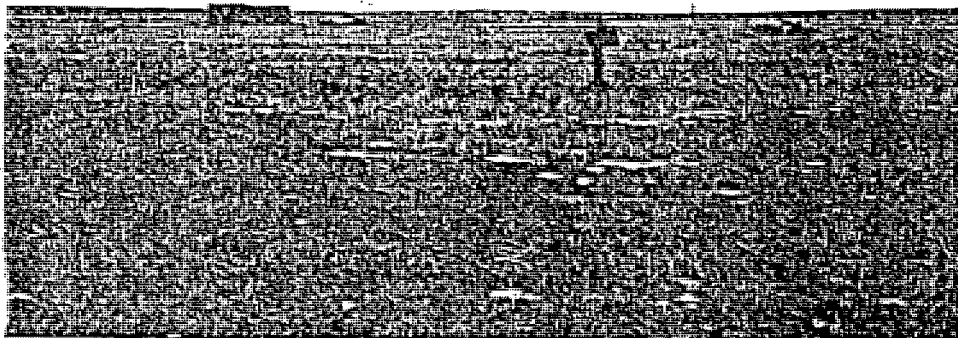




EPU-40

6-4
S-N

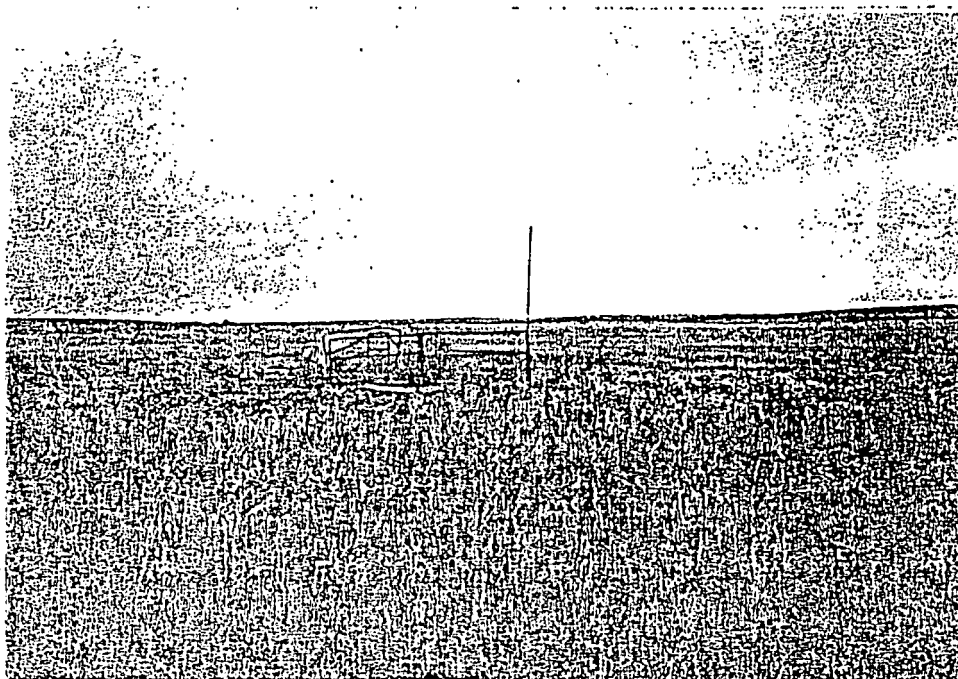
Geddart Lake
(1)



Smith 1
(N. Yards-Bkgd.)

6-5
ENE-WSW

Geddart Lake
(1)



MURPHY 10440

EPU-30

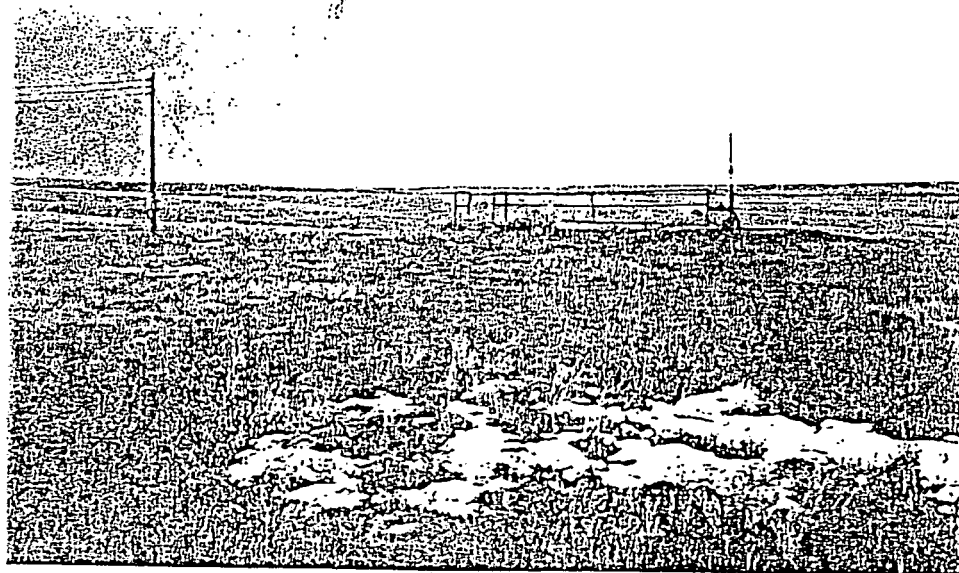
6-6
SW-NE

Geddart Lake
(1)

EPU-58

6-7
SW-NE

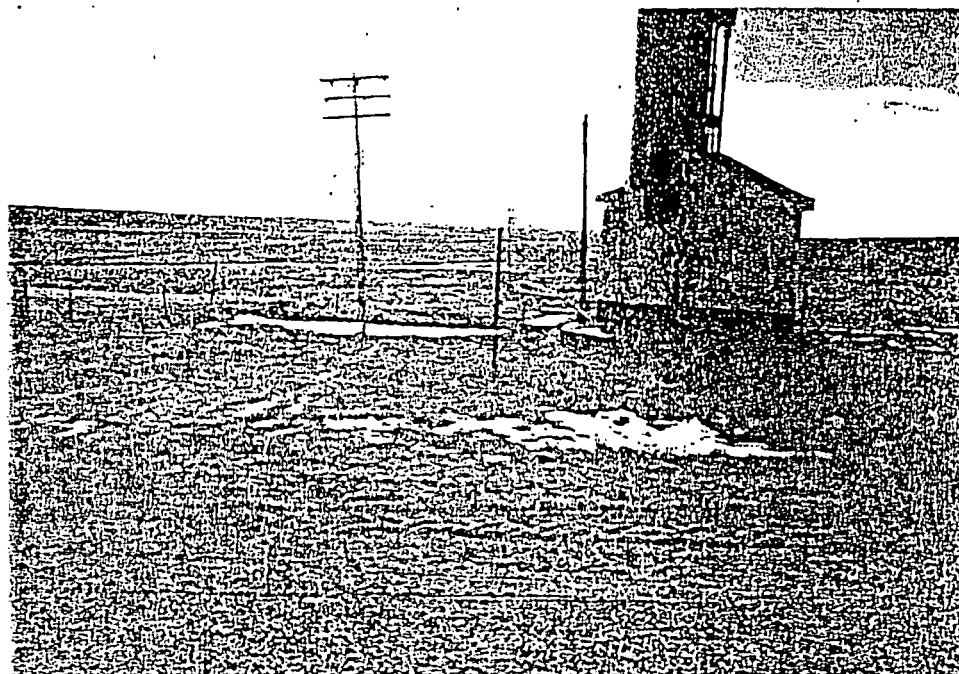
Geddart Lake
(1)



L-Battery

6-8
N-S

Long Creek East
(2)

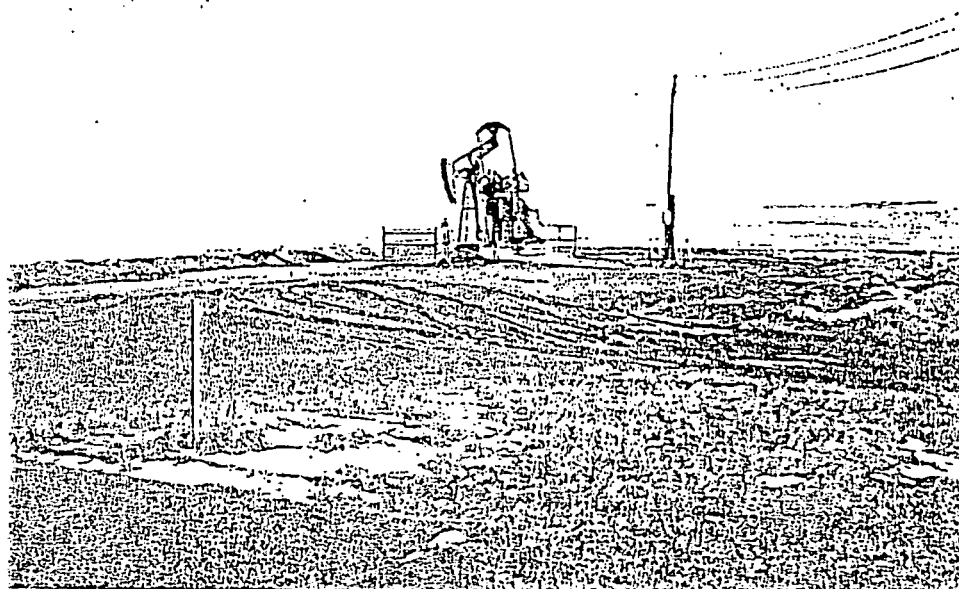


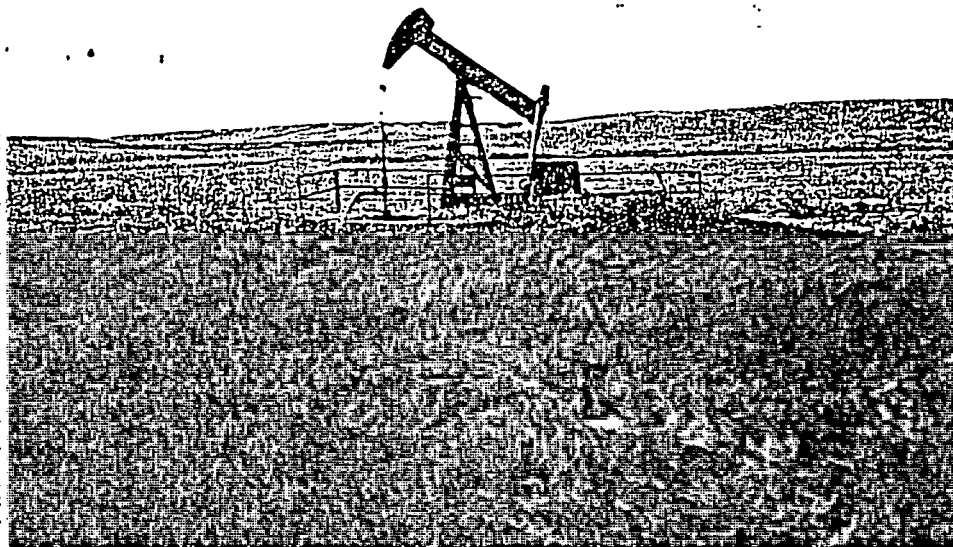
MURPHY 10441

EPU-73

6-9
WNW-ESE

Long Creek East
(2)

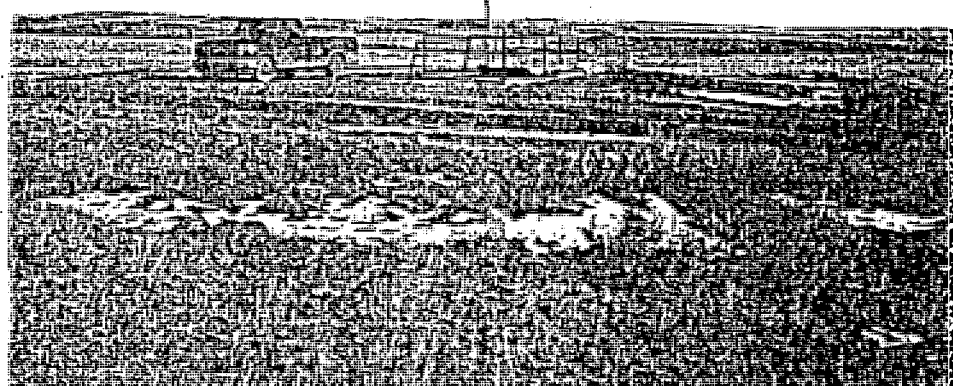
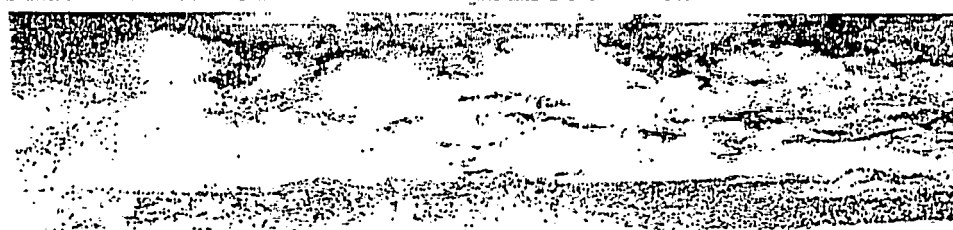




EPU-94

6-10
ENE-WSW

Long Creek East
(2)



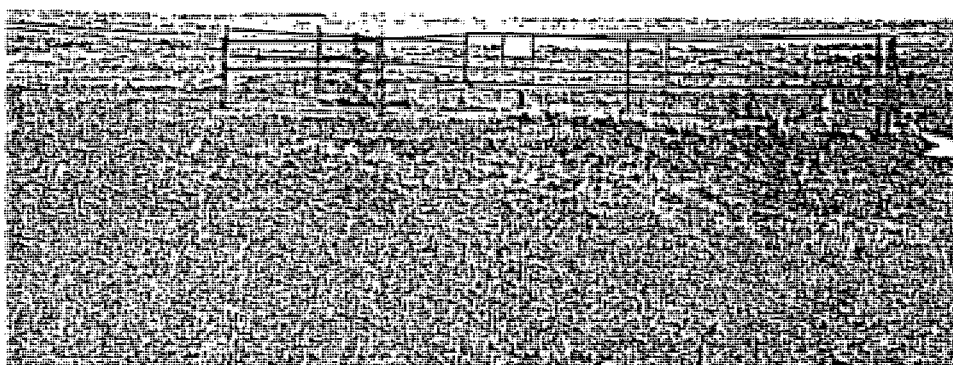
EPU-65

6-11
WNW-ESE

Long Creek East
(2)



MURPHY 10442



EPU-48

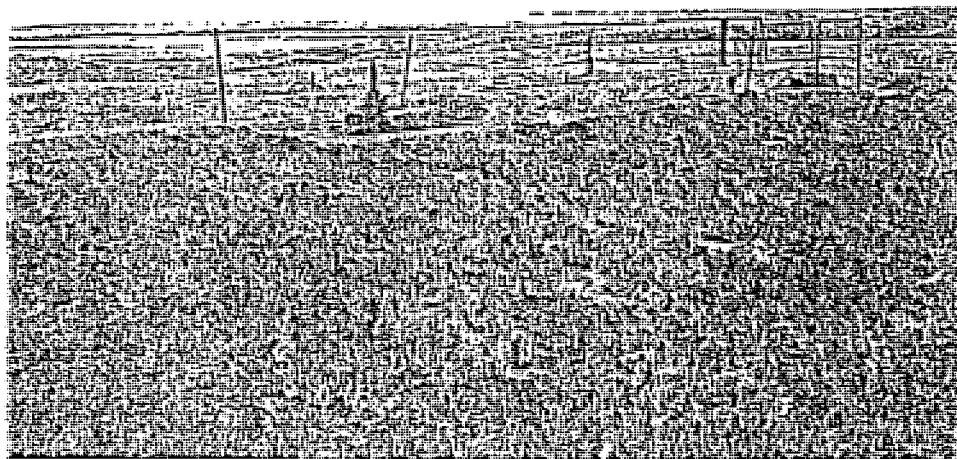
6-12
WSW-ENE

Long Creek East
(2)

EPU-37

6-13
NW-SE

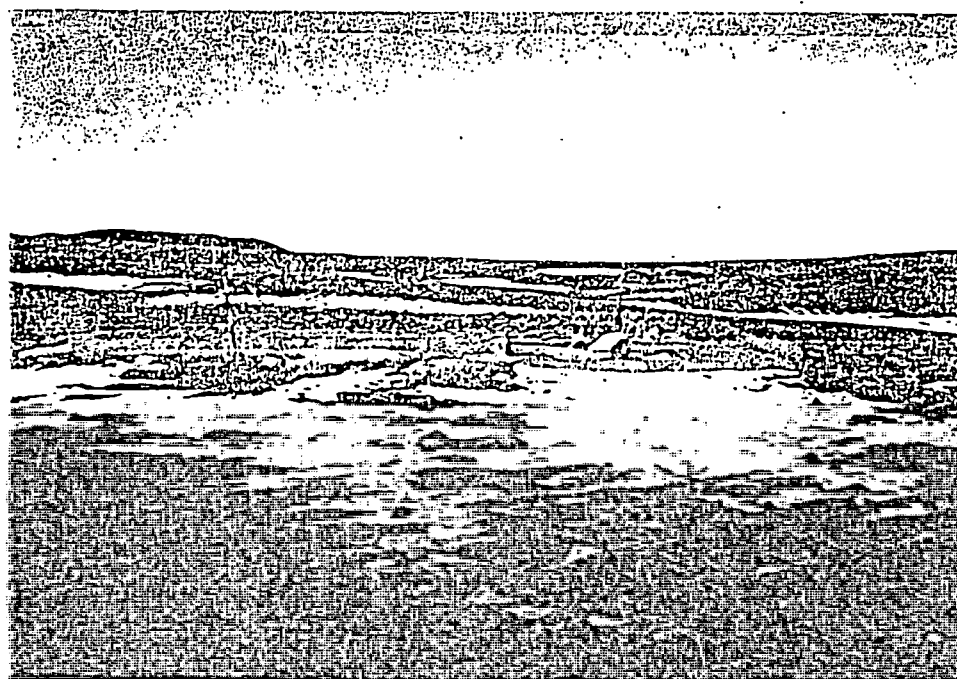
Long Creek East
(2)



EPU-71

6-14
S-N

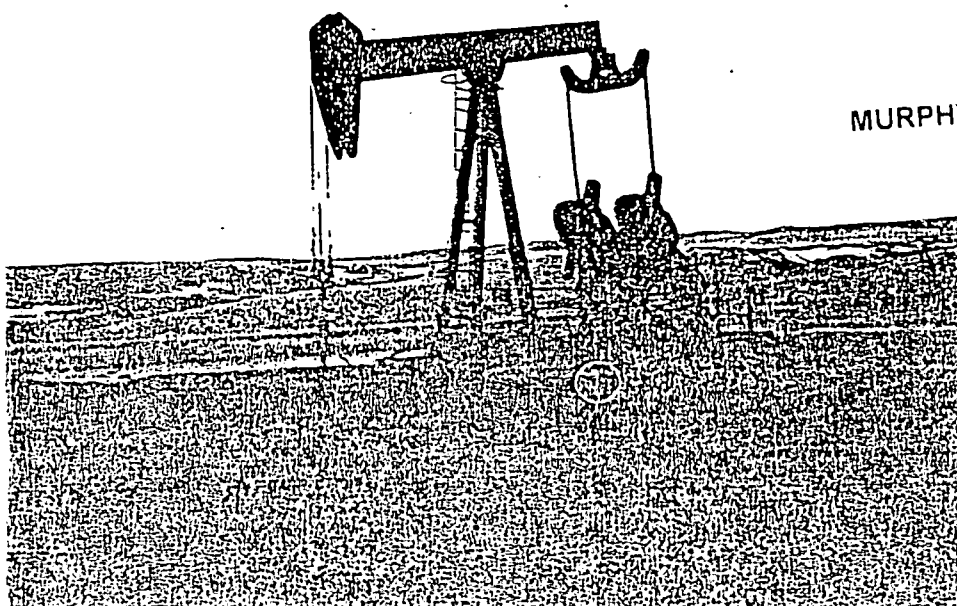
Long Creek East
(2)



EPU-111

6-15
S-N

Long Creek East
(2)



MURPHY 10443

Carolyn S. Ostby
Michael E. Webster
CROWLEY, HAUGHEY, HANSON,
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P. O. Box 2529
Billings, MT 59103-2529
Telephone: (406) 252-3441

Attorneys for Defendants
Murphy Oil USA, Inc. and
Murphy Exploration & Production Co.

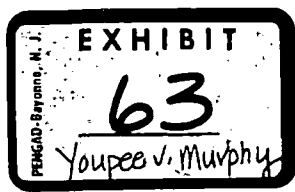
IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
BILLINGS DIVISION

CARY G. YOUPEE, et al.,)	Cause No.: CV 98-108-BLG-JDS
)	
Plaintiffs,)	MURPHY EXPLORATION &
)	PRODUCTION COMPANY'S
vs.)	RESPONSES TO PLAINTIFFS'
)	FIRST DISCOVERY REQUESTS
MURPHY OIL USA, INC., et al.,)	
)	
Defendants.)	

Defendant Murphy Exploration & Production Company
(hereinafter "Murphy E&P") responds to the plaintiffs' first
discovery requests as follows.

OBJECTIONS TO DEFINITIONS

(1) Murphy E&P objects to the definitions contained on
pages 2-5 of plaintiffs' discovery requests to the extent they



1 impose obligations beyond those contained in or allowed by the
2 Rules of Civil Procedure.

3 (2) Murphy E&P objects to definition (9) on page 4 of
4 plaintiffs' discovery requests to the extent it attempts to
5 impose discovery obligations on entities which are not parties
6 before the Court.

7 INTERROGATORY NO. 1: State whether Murphy, or any
8 predecessors or agents of the foregoing, have engaged in oil
9 exploration, oil development, oil production, the disposal of
10 water (or other byproducts associated with such oil production
11 or activity), and/or the abandonment of oil production
12 facilities in the East Poplar Oil field, located in Roosevelt
13 County, Montana. If the answer is in the affirmative, please
14 describe those activities; the location of the activity (ies)
15 within the East Poplar Oil Field; and the time period within
16 which such activity occurred.

17 ANSWER: Murphy E&P, or its predecessors in interest, have
18 been engaged in the exploration for, and production of, oil
19 lying within the exterior boundaries of the East Poplar Unit
20 since late 1951. A number of productive and unproductive
21 wells have been drilled within the boundaries of the East
22 Poplar Unit by Murphy E&P and other oil and gas companies.
23 Maps showing the location of most, if not all of these wells,
24 are contained within one or more of the United States
Geological Survey reports identified in Request for Production
No. 25, infra. Those wells of Murphy E&P which proved to
have no production potential or other value after being
drilled, or which have later become commercially nonproductive
or which have been determined to be of no further use, have
been plugged and abandoned in accordance with applicable state
and/or federal rules and regulations. Various other wells
(approximately 35) are currently producing oil from the Unit.
Certain wells within the Unit have been utilized as salt water
disposal wells. Other wells which may have potential value
for future operations, but which are not now required for
production purposes, are presently in shut-in status.

Because the underground reservoir which contains the
produced oil also contains water, both oil and water are
produced during production operations. Production has been

1 ongoing within the Unit since early 1952 through the present,
2 and produced water has been disposed of throughout this entire
time period.

3 REQUEST FOR PRODUCTION NO. 1: Please produce copies of
4 all the documents which concern, support or relate to your
Answers to Interrogatory No. 1

5 RESPONSE: Murphy E&P objects to this Request for
6 Production on the basis that the request is unduly burdensome
7 in that it seeks production of a huge number of documents,
8 most of which are of no relevance to the plaintiffs' claims,
9 covering nearly a 50 year period of time. Without waiving
10 this objection, Murphy E&P states that it will produce for
11 inspection by the plaintiffs those records and documents
12 maintained by Murphy E&P pertaining to the activities
described in answer to Interrogatory No. 1, at its offices
where such records are maintained in the usual course of
Murphy E&P business activities. Those offices are located in
New Orleans, Louisiana, Poplar, Montana, and El Dorado,
Arkansas. These records will be made available for review
upon reasonable notice during regular business hours.

12 INTERROGATORY NO. 2: Describe how Murphy, or any
13 predecessor or agent, disposed of the water associated with
14 their oil exploration &/or production (including secondary
recovery, if any) in the East Poplar Oil Field, Roosevelt
County, Montana, including:

- 15 (a) method of disposal (e.g. well, pit, etc.);
16 (b) location of disposal;
17 (c) time period(s) of disposal;
18 (d) amount of water disposed of;
19 (e) methods, if any, of monitoring disposal; and
20 (f) the identity of all persons or entities involved in
21 the disposal.

22 ANSWER: (a) Water produced in association with the
23 production of oil from the East Poplar Unit was, upon
24 separation from the produced oil, initially disposed
of in earthen pits located near tank batteries or
producing wells.

1 Since approximately September of 1957, disposal
2 of virtually all produced water has been via disposal
3 wells or pressure maintenance wells.

4 (b) Tank batteries with salt water disposal pits were as
5 follows:

- 6 - "A" Battery, located in the NE¼ of S 2, T28N, R51E
- 7 - "B" Battery, located in the NE¼ of S 32, T29N, R51E
- 8 - "C" Battery, located in the SW¼ of S 2, T28N, R51E
- 9 - "D" Battery, located in the SE¼ of S 10, T28N, R51E
- 10 - "E" Battery, located in the SW¼ of S 30, T29, R51E
- 11 - "F" Battery, located in the NE¼ of S 3, T28N, R51E
- 12 - "G" Battery, located in the SE¼ of S 2, T28N, R51E
- 13 - "H" Battery, located in the SW¼ of S 14, T28N, R51E
- 14 - "I" Battery, located in the SW¼ of S 19, T29N, R51E
- 15 - "J" Battery, located in the SW¼ of S 29, T29N, R51E
- 16 - "K" Battery, located in the SE¼ of S 11, T29N, R51E
- 17 - "L" Battery, located in the NE¼ of S 18, T29N, R51E
- 18 - "M" Battery, located in the SE¼ of S 17, T29N, R51E
- 19 - "N" Battery, located in the SE¼ of S 28, T28N, R51E
- 20 - "O" Battery, located in the NE¼ of S 28, T29N, R51E
- 21 - "P" Battery, located in the NE¼ of S 13, T29N, R51E
- 22 - "Q" Battery, located in the center of S 34, T29N,
23 R51E.

24 Salt Water Disposal Wells:

- 25 - East Poplar Unit Salt Water Disposal Well No. 1-D,
26 located in the SE¼SE¼ of
27 S 30, T29N, R51E.

- 1 - East Poplar Unit Salt Water Disposal Well No. 5-D,
2 located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of
3 § 19, T29N, R51E.
- 4 - East Poplar Unit Salt Water Disposal Well No. 29-D,
5 located in the SW $\frac{1}{4}$ SW $\frac{1}{4}$ of
6 § 28, T29N, R51E.
- 7 - East Poplar Unit Salt Water Disposal Well No. 8-D,
8 located in the NW $\frac{1}{4}$ SE $\frac{1}{4}$ of
9 § 10, T28N, R51E.
- 10 - East Poplar Unit Salt Water Disposal Well No. 80-D,
11 located in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ of
12 § 3, T28N, R51E.
- 13 - Huber 5-D, located in the SW $\frac{1}{4}$ NE $\frac{1}{4}$ of § 10, T28N, R51E
- 14 - East Poplar Unit Salt Water Disposal Well No. 59-D,
15 located in the SW $\frac{1}{4}$ NW $\frac{1}{4}$ of
16 § 4, T28N, R51E.

12 Pressure Maintenance Wells:

- 13 - East Poplar Unit Well No. 23, located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$
14 of § 24, T29N, R50E
- 15 - East Poplar Unit Well No. 46, located in the SW $\frac{1}{4}$ SW $\frac{1}{4}$
16 of § 25, T29N, R50E
- 17 - East Poplar Unit Well No. 59, located in the SW $\frac{1}{4}$ NW $\frac{1}{4}$
18 of § 4, T28N, R51E
- 19 - Owens-Simons Well, located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ of § 16,
20 T29N, R51E
- 21 - Rehder Well, located in the NE $\frac{1}{4}$ NW $\frac{1}{4}$ of § 16, T29N,
22 R51E
- 23 - Smith Well, located in the SW $\frac{1}{4}$ SE $\frac{1}{4}$ of § 8, T29N,
24 R51E.

1 c.

2 Disposal Pits:

- 3 - Tank Battery "A" storage pit was used from March,
4 1952 through September 1957
- 5 - Tank Batteries "B" and "C" storage pits were used
6 from July, 1952 through September, 1957
- 7 - Tank Battery "D" storage pit was used from August,
8 1952 through September, 1957
- 9 - Tank Battery "E" storage pit was used from November,
10 1952 through September, 1957
- 11 - Tank Battery "F" storage pit was used from December,
12 1952 through September, 1957
- 13 - Tank Battery "G" storage pit was used from March,
14 1953 through September, 1957
- 15 - Tank Battery "H" storage pit was used from May, 1953
16 through September, 1957
- 17 - Tank Battery "I" storage pit was used from January,
18 1953 through September, 1957
- 19 - Tank Battery "J" storage pit was used from July,
20 1953 through September, 1957
- 21 - Tank Battery "K" storage pit was used from July,
22 1953 through September, 1957
- 23 - Tank Battery "L" storage pit was used from December,
24 1953 through September, 1957
- Tank Battery "M" storage pit was used from March,
1954 through September, 1957
- Tank Battery "N" storage pit was used from
September, 1954 through September, 1957
- Tank Battery "O" storage pit was used from
September, 1954 through September, 1957

1 - Tank Battery "P" storage pit was used from February,
1954 through September, 1957

2 - Tank Battery "Q" storage pit was used from
3 September, 1955 through September, 1957

4 Salt Water Disposal Wells:

5 - East Poplar Unit Salt Water Disposal Well 1-D was
6 first used in September, 1957 and is still in use

7 - East Poplar Unit Salt Water Disposal Well 5-D was
8 first used in February, 1976 and is still in use

9 - East Poplar Unit Salt water disposal Well 29-D was
10 used from May, 1981 through December, 1986

11 - East Poplar Unit Salt Water Disposal well 8-D was
12 first used in October, 1972 and is still in use

13 - East Poplar Unit Salt Water Disposal Well 80-D was
14 first used in January, 1964 and is still in use

15 - the Huber 5-D Salt Water Disposal Well was first
16 used in November, 1997 and is still in use

17 - East Poplar Unit Salt Water Disposal Well 59-D was
18 used from June, 1961 through June, 1994

19 Pressure Maintenance Wells:

20 - East Poplar Unit Well No. 23* was used for pressure
21 maintenance from June, 1959 through approximately
22 1963

23 - East Poplar Unit Wells 46* and 59* were used for
24 pressure maintenance from August, 1959 through
approximately 1963

- The Owens-Simons Well* was used for pressure
maintenance from October, 1960 through January, 1965

- The Rehder* Well was used for pressure maintenance
from September, 1960 through January, 1965

- The Smith* Well was used for pressure maintenance
from August, 1960 through January 1965.

1 (d) Approximately 10,686,214 barrels of produced water
2 were disposed of into earthen pits. Approximately
3 231,543,878 barrels of produced water have been
4 disposed of through salt water disposal wells (as of
January 31, 1999). Approximately 10,106,455 barrels
of produced water were disposed of by re-injection
into pressure maintenance wells.

5 (e) Prior to the Environmental Protection Agency taking
6 primacy over salt water disposal wells, Murphy E&P
7 periodically tested the casing of salt water
8 disposal wells by filling the tubing of such wells
9 with oil to check for any casing leaks or other
10 problems. In or before 1984, packers and tubing
11 were installed on all Murphy E&P salt water disposal
wells, and the casing was then subject to periodic
pressure testing. Since the Environmental
Protection Agency has assumed primacy over the salt
water disposal wells on the Reservation, mechanical
integrity tests are conducted on a regular basis in
conformity with EPA rules and regulations.

12 (f) Murphy E&P employees who have been involved in
disposal activities include:

13 Ray Reede
14 Box 174, MT. Highway
Wolf Point, Montana

15 Tim Trottier
16 Box 451
Poplar, Montana

17 Jim Corne
18 P.O. Box 1566
Poplar, Montana

19 Gary Grainger
20 P. O. Box 2011 NSR
Poplar, Montana

21 Terry Ross
22 Box 1428
Poplar, Montana

1 Jerry Hagadone
2 Box 251
3 Poplar, Montana
4 406-768-3944

5 In addition, the following individuals and/or
6 companies have some information regarding the disposal
7 activities of Murphy E&P:

8 - EPA contacts -

9 Bill Engle
10 Helena, Montana
11 406-449-5486

12 Jim Boyter
13 Helena, Montana
14 406-441-1140

15 Emmett Schmitz
16 Denver, Colorado
17 303-293-1436

18 Gus Stoltz
19 Denver, Colorado
20 303-293-1416

21 John Carson
22 Denver, Colorado
23 303-293-1416

24 - BLM contacts -

John Bramhall
Miles City, Montana
406-232-7001

Chuck Laakso
Miles City, Montana
406-232-7701

Irene Harris
Miles City, Montana
406-232-7001

Bernice Knopp
Miles City, Montana
406-232-7001

1 - Tribal contacts -

2 Thomas Ankatell
3 Poplar, Montana
4 406-768-5115

5 Debbie Madison
6 Poplar, Montana
7 406-768-5115

8 - Others -

9 Harvey Sandau
10 100 6th Ave. North
11 Wolf Point, MT

12 Ed Huso
13 Oilfield Construction Service
14 201 D. Street West
15 Poplar, Montana
16 406-7683847

17 Jim Jones
18 Oilfield Maintenance
19 Gillette, WY
20 307-682-4141

21 Richard Knoulton
22 Richards Roustabout Service
23 Poplar, MT
24 406-448-2563

 Glen Allison
 Allison Well Service -
 7122 Hwy. 291
 Tum Tum, WA 99034
 509-276-6266

 Dwayne Hagadone
 H & H Well Service
 P.O. Box 1244
 Poplar, MT
 406-768-5259

1 Allen Hagadone
2 H & H Well Service
3 P. O. Box 1244
4 Poplar, MT
5 406-768-3403

6 REQUEST FOR PRODUCTION NO. 2: Please produce copies of
7 all documents concerning, relating to and/or that support your
8 answer to Interrogatory No. 2.

9 RESPONSE: Monthly Well Reports and Reports of Subsurface
10 Injection, EPA Annual Disposal Injection Reports, and Daily
11 Disposal Reports, all contain information concerning the
12 quantities of produced water disposed of by Murphy E&P. These
13 records are available for review at the Poplar, Montana office
14 of Murphy E&P. Other documents possibly covered by this
15 request are maintained by Murphy E&P in the normal course of
16 its business activities at its offices in Poplar, Montana and
17 New Orleans, Louisiana. Murphy E&P will make records
18 responsive to this request available for inspection by the
19 plaintiffs at the referenced offices upon reasonable notice
20 and during regular business hours.

21 INTERROGATORY NO. 3: Identify all individuals whom you
22 believe to have knowledge of Murphy's activities concerning
23 disposal wells and systems and abandonment of oil wells and
24 systems in the East Poplar Oil Field in Roosevelt County,
Montana.

ANSWER: In addition to those individuals listed in answer
to Part F of Interrogatory No. 2 set forth above, Murphy E&P
believes the following individuals may also have knowledge of
its operations:

18 Larry Sage
19 105 E. Santee Street
20 Poplar, MT
21 406-768-3364

22 Sidney Campbell
23 P.O. Box 61780
24 New Orleans, LA 70111

Paul Ramsey
P.O. Box 1498
Mandeville, LA 70470

1 Alvin Simpson
17810 Inverness Ave.
2 Baton Rouge, LA 70810
504-755-6255

3 Fred Beebe
4 29 Willow Bend Dr.
Billings, MT 59102

5 Sharon Bravard
6 Poplar, MT 59255

7 Jeff Holland
156 Trace Loop
8 Mandeville, LA 70448

9 Tim Brunson
1341 Albert Street
10 Mandeville, LA 70448

11 William Brown
1006 - 5th Ave.
12 Laurel, MT

13 Bruce McArthur
P. O. Box 61780
14 New Orleans, LA 70111

15 **REQUEST FOR PRODUCTION NO. 3:** Please produce all
documents which you intend to rely upon at the trial in this
16 matter.

17 **RESPONSE:** Murphy E&P objects to this request because it
is directed at the mental impressions, conclusions, opinions
18 and/or legal theories of Murphy E&P's legal counsel. Without
waiving this objection, Murphy E&P shall, pursuant to any
19 Scheduling Order or Orders of this Court, identify exhibits or
documents which Murphy E&P expects to offer at trial in this
20 matter at the times and in the manner prescribed by any such
Order or Orders. When so identified, Murphy E&P will provide
21 copies to plaintiffs or otherwise make such documents
available for plaintiffs' review.

22 **REQUEST FOR PRODUCTION NO. 4:** Produce all documents
regarding Murphy's maintenance of oil wells, water disposal
23 wells, or water disposal systems within Roosevelt County.
24

1 RESPONSE: Murphy E&P objects to this request to the
2 extent it seeks documents related to activities or operations
3 of Murphy E&P conducted outside the East Poplar Unit Area,
4 since such documents are outside the scope of proper discovery
5 herein. Documents responsive to this request in the
6 possession of Murphy E&P which relate to the East Poplar Unit
may be reviewed at the locations where they are maintained in
the usual course of Murphy E&P's business activities. The
offices wherein such records are located are in Poplar,
Montana and New Orleans, Louisiana. Those records responsive
to this request shall be made available for review upon
reasonable notice during regular business hours.

7 REQUEST FOR PRODUCTION NO. 5: Produce all documents
8 concerning any leaks, spills, or malfunctions in Murphy's oil
9 wells or disposal systems, including but not limited to
documents concerning attempts to identify and/or alleviate any
such leaks, spills, or malfunctions.

10 RESPONSE: Murphy E&P objects to this request to the
11 extent it seeks documents related to activities or operations
12 of Murphy E&P conducted outside the East Poplar Unit Area,
13 since any such documents are outside the scope of proper
14 discovery. Any documents responsive to this request in the
15 possession of Murphy E&P which relate to the East Poplar Unit
16 may be reviewed at the locations where they are maintained in
the usual course of Murphy E&P's business activities. The
offices wherein any such records are maintained are located in
Poplar, Montana and New Orleans, Louisiana. Records will be
made available for review upon reasonable notice during
regular business hours.

17 REQUEST FOR PRODUCTION NO. 6: Produce all documents
18 concerning possible, potential, or actual contamination of
19 groundwater from oil exploration & production activity, and
water disposal associated therewith, in the East Poplar Oil
Field, or concerning risks of groundwater contamination from
such activity.

20 RESPONSE: Murphy E&P objects to this request insofar as
21 it requests Murphy E&P to speculate about "possible" or
22 "potential" contamination and about "risks" of contamination.
23 A defendant is not required to so speculate. Murphy E&P does
24 not admit that any of its activities have resulted in any
contamination of plaintiffs' groundwater. With that
clarification and without waiver of objection, any documents
responsive to this request in the possession of Murphy E&P may

1 be reviewed at the locations where they are maintained in the
2 usual course of Murphy E&P's business activities. The offices
3 wherein any such records are maintained are located in Poplar,
4 Montana and New Orleans, Louisiana. Records will be made
5 available for review upon reasonable notice during regular
6 business hours.

7 REQUEST FOR ADMISSION NO. 1: Admit that water contained
8 in the underground aquifer under the East Poplar Oil Field
9 study area identified in the May, 1997 USGS report (Thamke &
10 Craig) is now contaminated by saline-water.

11 RESPONSE:

12 Admit _____ Deny X

13 INTERROGATORY NO. 4: If you do not admit the preceding
14 request for admission, please state in detail every reason why
15 you do not make the admission and state each fact of which you
16 have knowledge which tends to support your answer.

17 ANSWER: Murphy E&P objects inasmuch as the term
18 "contaminated" in Request for Admission No. 1 is ambiguous,
19 unquantified, and otherwise unclear. Murphy E&P admits that
20 certain water samples reported in connection with the
21 referenced 1997 USGS report show levels of some minerals or
22 chemicals which exceed secondary drinking water quality
23 standards. However, not all underground water within the East
24 Poplar Unit Area contains elevated levels of such minerals or
chemicals. Thus, Murphy E&P admits that some, but not all, of
the water underlying the East Poplar Oil Field would not
satisfy secondary drinking water quality standards.

REQUEST FOR PRODUCTION NO. 7: If you do not admit
Request for Admission No. 1, please produce each document in
your possession or control which tends to support your answer
to Interrogatory No. 4.

RESPONSE: The information which discloses that only
certain underground water sources fail to meet secondary
drinking water standards is contained within the referenced
USGS report and other similar reports prepared by the USGS.

INTERROGATORY NO. 5: In Murphy's "Affirmative Defenses"
it is alleged that Plaintiffs' damages, "if any, were the
result of natural causes, or were caused by the plaintiffs
themselves, or were caused by persons or entities other than

1 Murphy E&P Exploration" See ¶ 23. With respect to
this affirmative defense,

2 (a) identify "the natural causes" of the Plaintiffs'
3 damages;

4 (b) explain how the plaintiffs caused their
damages; and

5 (c) identify all persons or entities other than Murphy
6 E&P whom you believe caused or contributed to
Plaintiffs' damages.

7 ANSWER: (a) Initially, Murphy E&P states that it
8 does not herein admit or agree that the plaintiffs have
suffered any "damages." With that clarification, Murphy
9 believes that natural geological conditions, including the
possible presence of subsurface marine shale rocks and saline
10 seeps, may have caused and/or contributed to any elevated
levels of certain minerals or chemicals contained within the
water underlying the East Poplar Unit. In addition, farming
11 practices may have permitted various chemicals and minerals,
whether found naturally or otherwise added to the soil, to
12 leech into the groundwater lying beneath such lands, thus
causing or contributing to elevated levels of certain
13 chemicals or minerals. In addition, precipitation levels in
the East Poplar Unit Area or in the aquifer recharge area and
14 man-made restrictions on the level of flow within the Poplar
River may have all acted to impact the quality and quantity of
15 the aquifer lying beneath the East Poplar Unit Area.

16 (b) Plaintiffs' use of their lands, through farming
practices, either carried out directly by the plaintiffs, or
17 by others with the plaintiffs' consent, may have contributed,
on a plaintiff-by-plaintiff basis, to, or caused, any
18 groundwater problems now being encountered. The location and
manner of waste disposal, including the location, age and
19 functional capabilities of septic systems, may have
contributed, on a plaintiff-by-plaintiff basis, to, or caused,
20 any groundwater problems now being encountered by any
particular plaintiff.

21 (c) Murphy E&P has not completed its investigation into
22 the plaintiffs' claims, and thus has not identified whether
there are any parties, and if so, the identity of any such
23 party or parties who might be liable for changes, if any, in
the quality of the groundwater lying beneath the East Poplar
24 Unit. However, as noted above, those utilizing the surface of

1 the East Poplar Unit Area for agricultural purposes may have
2 contributed to any alleged changes in groundwater quality.
3 Also, individual plaintiffs themselves may have contributed to
4 any alleged change in groundwater quality. Finally, other oil
and gas companies which have owned or operated wells within or
near the East Poplar Unit Area may also have contributed to
the alleged changes in groundwater quality.

5 REQUEST FOR PRODUCTION NO. 8: Please produce copies of
6 all the documents which relate to or support your answer in
the above interrogatory.

7 RESPONSE: Murphy E&P has not completed its investigation
8 into plaintiffs' claims, and thus has assembled no direct
9 documentation relating to its answers to Interrogatory No. 5.
10 It is possible that some documents related to or supportive of
11 the above are in Murphy E&P's possession in the context of the
12 general records maintained in the usual course of Murphy E&P's
business activities. The offices wherein such documents, if
any, would be maintained are located in Poplar, Montana and
New Orleans, Louisiana. Such records will be made available
for review at the above-referenced offices upon reasonable
notice during regular business hours.

13 INTERROGATORY NO. 6: Describe why you believe each of
14 the persons or entities named in your response to the
15 preceding interrogatory caused Plaintiffs' damages, including
a description of the activities of such persons or entities
which you believe caused Plaintiffs' damages.

16 ANSWER: See Answers to Interrogatory No. 5.

17 REQUEST FOR PRODUCTION NO. 9: Please produce copies of
18 all the documents which relate to or support your answer in
the above interrogatory.

19 RESPONSE: See Answer to Request No. 8.

20 INTERROGATORY NO. 7: Identify and describe all pipelines
21 used or owned by Murphy in Roosevelt County which are greater
than 17" in inside diameter. For all such pipelines, state:

- 22 (a) the inside diameter;
23 (b) the location of the pipeline;
24 (c) the length of the pipeline;

1 (d) the use of the pipeline;

2 (e) a description of any associated facilities, and
their location;

3 (f) the period of use of such pipelines.

4 ANSWER: Murphy E&P objects to this interrogatory to the
5 extent it seeks information or otherwise relates to matters
6 not associated with the East Poplar Unit Area. Without
7 waiving this objection, Murphy E&P states that it neither
owns, nor to the best of its knowledge uses, any pipelines in
Roosevelt County with an inside diameter in excess of 17".

8 REQUEST FOR PRODUCTION NO. 10: Produce all documents in
9 your possession or control authored by any governmental agency
10 concerning studies, criticisms, requests for information or
11 comments concerning Murphy's, or its predecessors',
affiliates', or agents', oil exploration &/or production,
maintenance and repair activities and abandonment of oil
production and disposal facilities in the East Poplar Oil
Field in Roosevelt County, Montana.

12 RESPONSE: Murphy E&P objects to this request as being
13 confusing, overbroad and unreasonable. Murphy E&P also
14 objects that this request apparently is not limited to the
15 matters relevant to the plaintiffs' claims or likely to lead
16 to admissible evidence. Without waiving this objection,
17 Murphy E&P would advise that responsive documents, if any,
18 authored by governmental agencies regarding its oil field
19 activities in the East Poplar Unit, in the possession of
Murphy E&P, may be reviewed at the locations where those
records are maintained in the usual course of Murphy E&P's
business activities. These offices are located in Poplar,
Montana and New Orleans, Louisiana. Such records, if any,
will be made available for review upon reasonable notice
during regular business hours.

20 REQUEST FOR PRODUCTION NO. 11: Produce copies of all
21 documents in your possession or control authored by any person
22 or entity other than a governmental agency, including but not
23 limited to the Defendant's internal documents, concerning
24 studies, criticisms, requests for information or comments
concerning Murphy's, or its predecessors', affiliates', or
agents', oil exploration, production, disposal, maintenance
and repair activities and abandonment of oil production and

1 disposal facilities in the East Poplar Oil Field in Roosevelt
2 County, Montana.

3 RESPONSE: Murphy E&P objects to this request as being
4 confusing, overbroad and unreasonable. Murphy E&P further
5 objects that it is not limited to the matters raised in the
6 plaintiffs' complaint. Murphy E&P also objects to the extent
7 this request would cover documents that are subject to either
8 the attorney-client privilege or work product protections.
9 Without waiving these objections, Murphy E&P would advise that
non-protected documents responsive to this request in the
possession of Murphy E&P may be reviewed at the locations
where those records are maintained in the usual course of
Murphy E&P's business activities, at offices located in
Poplar, Montana and New Orleans, Louisiana. Such records, if
any, will be made available for review upon reasonable notice
during regular business hours.

10 REQUEST FOR PRODUCTION NO. 12: Produce the most recent
11 financial reports, including balance sheets and income
statements, for Murphy Production.

12 RESPONSE: [NOTE: "Murphy Production" is assumed to mean
Murphy E&P in this request.]

13 Murphy E&P objects to this Request. The requested
14 documents are outside the scope of legitimate discovery, are
15 not relevant, and are not reasonably calculated to lead to
16 the discovery of admissible evidence. The plaintiffs have
17 produced and/or advanced no information or basis upon which to
reasonably believe that punitive damages would be appropriate
or allowed in this case, and the requested information has no
relationship to any other claims advanced by plaintiffs in
their complaint.

18 Murphy E&P, however, will join Murphy Oil USA, Inc.'s
19 request that Murphy Oil USA, Inc. be dismissed from this suit.
20 To that end, Murphy E&P's consolidated financial statements
21 for the years 1995, 1996 and 1997 were sent to plaintiffs with
22 Murphy Oil USA, Inc.'s Prediscovery Disclosure Statement
(Exhibits 2 and 3 thereto). The 1998 consolidated financial
statement of Murphy E&P will also be produced when it is
completed.

23 REQUEST FOR PRODUCTION NO. 13: Produce the 1995-98 annual
24 reports for Murphy Production.

1 RESPONSE: [NOTE: "Murphy Production" is assumed to mean
2 Murphy E&P in this request.] Murphy E&P does not have annual
3 reports for the referenced years.

4 REQUEST FOR ADMISSION NO. 2: Please admit that brine is
5 a byproduct of the production of crude oil in the East Poplar
6 oil Field.

7 RESPONSE: Admit.

8 INTERROGATORY NO. 8: Please identify all sources of
9 brine, aside from the production of crude oil, in the East
10 Poplar Oil Field.

11 ANSWER: Murphy E&P has not completed its review of the
12 plaintiffs' claims, and has not, to date, identified any other
13 sources of brine. See also Answer to Interrogatory No. 5,
14 *supra*.

15 INTERROGATORY NO. 9: Please state whether your company
16 has installed any monitoring or test wells in the East Poplar
17 Oil Field to review, confirm, monitor, refute or analyze the
18 existence and/or possible source of saline water plumes in the
19 East Poplar Oil Field.

20 ANSWER: Murphy E&P assumes that this interrogatory
21 pertains to those "plumes" purportedly identified by the USGS
22 in one or more of the reports which are herein referenced by
23 the plaintiffs. Murphy E&P has not installed any monitoring
24 or test wells of the type mentioned. Murphy E&P continues to
25 conduct its activities and operations in conformity with
26 applicable state and federal regulations, and continues to
27 monitor its existing wells, including injection wells, so that
28 such wells comply with applicable state and federal laws
29 governing and/or applicable to such wells.

30 REQUEST FOR PRODUCTION NO. 14: Please produce all
31 documents referred to, consulted or concerning your answer to
32 the immediately preceding interrogatory.

33 RESPONSE: Documents relating to the testing of Murphy
34 E&P's wells, including documents relating to the Environmental
35 Protection Agency's mechanical integrity tests of disposal
36 wells, which are in the possession of Murphy E&P may be
37 reviewed at the locations where those records are maintained
38 in the usual course of Murphy E&P's business activities. The
39 offices wherein such documents are maintained are located in

1 Poplar, Montana and New Orleans, Louisiana. Such records will
2 be made available for review upon reasonable notice during
regular business hours.

3 INTERROGATORY NO. 10: Please state whether your company
4 has performed any electromagnetic conductivity analysis within
the East Poplar Oil Field.

5 ANSWER: Murphy E&P has performed no electromagnetic
conductivity analysis within the East Poplar oil field.

6 REQUEST FOR PRODUCTION NO. 15: Please produce all
7 documents identified or referred to response to the
immediately preceding interrogatory.

8 RESPONSE: There are no documents.

9 REQUEST FOR PRODUCTION NO. 16: Please produce copies of
10 all correspondence, memos, letters, and other documents from
any and all land owners, lessees, citizens, government
11 agencies, oil companies, consultants and the like, concerning
the presence, or possible presence of saline water
12 contamination in quaternary alluvium along the Poplar River.

13 RESPONSE: Murphy E&P objects to this Request to the
extent it seeks any correspondence or other documents which
14 may be the subject of attorney-client privilege or work-
product protection. Without waiving this objection, any non-
15 protected documents responsive to this Request which are in
the possession of Murphy E&P may be reviewed at those
16 locations where such records are maintained in the usual
course of Murphy E&P's business activities. Those offices are
17 located in Poplar, Montana and New Orleans, Louisiana. Such
records, if any, will be made available for review upon
18 reasonable notice during regular business hours.

19 INTERROGATORY NO. 11: Please state whether your company
or any consultants, agents or independent contractors employed
20 or hired by you have conducted an electromagnetic geophysical
survey of any portion of real property within the East Poplar
21 Oil Field.

22 ANSWER: Murphy E&P objects to this request insofar as it
requests information regarding facts known or opinions held by
23 non-testifying experts. Without waiving this objection,
Murphy E&P states that no such survey has been undertaken.

1 REQUEST FOR PRODUCTION NO. 17: Please produce all
2 documents identified or referred to response to the
immediately preceding interrogatory.

3 RESPONSE: Not applicable. See objection and response to
4 the preceding interrogatory.

5 REQUEST FOR ADMISSION NO. 3: Please admit that along
6 with the production of crude oil, your company has produced
brine (i.e., water having a dissolved-solids concentration
greater than 35,000 mg/L) in the East Poplar Oil Field.

7 RESPONSE: Admit.

8 REQUEST FOR PRODUCTION NO. 18: Please produce copies of
9 all documents reflecting the concentration of brine in any of
your oil wells, disposal wells and disposal systems.

10 RESPONSE: Murphy E&P objects to this request to the
11 extent it could be construed as relating to wells or disposal
12 systems located outside the East Poplar Unit Area. East
13 Poplar Unit Area documents responsive to this Request which
14 are in the possession of Murphy E&P may be reviewed at those
locations where such records are maintained in the usual
course of Murphy E&P's business activities. Those offices are
located in Poplar, Montana and New Orleans, Louisiana. Such
records will be made available for review upon reasonable
notice during regular business hours.

15 INTERROGATORY NO. 12: Please identify whether any brine
16 injection wells, or other disposal systems under your
ownership, direction or control are active.

17 ANSWER: Murphy E&P objects to this interrogatory to the
18 extent it could be construed as relating to wells or disposal
19 systems located outside the East Poplar Unit Area. The
following salt water disposal wells are in current use within
the East Poplar Oil Field:

20 Salt Water Disposal Well 1-D

21 Salt Water Disposal Well 5-D

22 Salt Water Disposal Well 8-D

23 Salt Water Disposal Well 80-D

24 Huber #5 Salt Water Disposal Well

1 REQUEST FOR PRODUCTION NO. 19: Please produce all
2 documents concerning the amount of brine disposed of through
your brine injection wells and other disposal systems.

3 RESPONSE: Murphy E&P objects to this request to the
4 extent it could be construed as relating to wells or disposal
5 systems located outside the East Poplar Unit Area. Monthly
6 Well Reports, Reports of Subsurface Injection, EPA Annual
7 Disposal Injection Reports, and Daily Disposal records (and
8 perhaps others) all identify quantities of water produced and
9 disposed of by Murphy E&P within the East Poplar Unit Area.
10 Copies of all such documents in the possession of Murphy E&P
related to the East Poplar Unit Area may be viewed at the
locations where such records are maintained in the usual
course of Murphy E&P's business activities. The offices
wherein such documents are maintained are located in Poplar,
Montana and in New Orleans, Louisiana. Such records will be
made available for review upon reasonable notice during
regular business hours.

11 REQUEST FOR PRODUCTION NO. 20: Please produce copies of
12 all documents sent to or provided to the Environmental
13 Protection Agency, Bureau of Land Management, USGS, and any
other federal, tribal, state, county or local government
agency concerning the injection of brine through brine
injection wells.

14 RESPONSE: Murphy E&P objects to this Request and states
15 that the parties possessing the requested documents are those
16 identified in this Request. Murphy E&P also objects to this
17 request to the extent it could be construed as relating to
18 wells or disposal systems located outside the East Poplar Unit
19 Area. Without waiving these objections, any East Poplar Unit
20 Area documents responsive to this Request which are in the
possession of Murphy E&P may be reviewed at those locations
where such records are maintained in the usual course of
Murphy E&P's business activities. Those offices are located
in Poplar, Montana and New Orleans, Louisiana. Such records
will be made available for review upon reasonable notice
during regular business hours.

21 REQUEST FOR PRODUCTION NO. 21: Please produce copies of
22 all documents sent to or provided to any other consultant
23 retained by you concerning the injection of brine through
brine injection wells.

1 RESPONSE: Murphy E&P objects to this request insofar as
2 it seeks privileged and protected documents which have been
3 prepared in anticipation of litigation and/or in preparation
4 for trial. Murphy E&P has no unprotected documents responsive
5 to this request.

6 INTERROGATORY NO. 13: Please identify the quantity of
7 brine that has been directed by your company into storage and
8 evaporation pits by year.

9 ANSWER: Murphy E&P objects to this interrogatory to the
10 extent it could be construed as relating to wells or disposal
11 systems located outside the East Poplar Unit Area. With
12 respect to the East Poplar Unit Area, the total amount of
13 produced water disposed of into pits by Murphy E&P totals
14 approximately 10,686,214 barrels. Disposal of this amount
15 occurred between March, 1952 and September, 1957. The exact
16 totals are not broken down on a year-to-year basis. Such a
17 breakdown may be indicated or ascertainable from disposal
18 records and reports prepared by Murphy E&P during its regular
19 business activities. Since the burden of locating such files
20 and determining the requested breakdown would be substantially
21 the same for Murphy E&P as for the plaintiffs, Murphy E&P
22 agrees to make these disposal records available for
23 examination at Murphy E&P's offices in Poplar, Montana and New
24 Orleans, Louisiana. Such records will be made available for
inspection upon reasonable notice during regular business
hours.

15 REQUEST FOR PRODUCTION NO. 22: Please produce copies of
16 all documents concerning the immediately preceding
17 interrogatory.

18 RESPONSE: See answer to Interrogatory No. 13.

19 REQUEST FOR PRODUCTION NO. 23: Please produce all
20 documents reflecting attempts by your company to reinject
21 brine into oil producing zones for secondary recovery.

22 RESPONSE: Murphy E&P objects to this interrogatory to
23 the extent it could be construed as relating to reinjection
24 activities occurring outside the East Poplar Unit Area. Murphy
E&P states that documents responsive to this Request which are
in the possession of Murphy E&P relating to the East Poplar
Unit Area may be reviewed at those locations where such
records are maintained in the usual course of Murphy E&P's
business activities. Those offices are located in Poplar,

1 Montana and New Orleans, Louisiana. Such records will be made
2 available for review upon reasonable notice during regular
business hours.

3 REQUEST FOR PRODUCTION NO. 24: Please produce copies of
4 all documents received by Murphy Production from all of the
5 following oil companies, or its accountants, agents,
attorneys, officers or directors, concerning contamination, or
possible contamination, of the groundwater aquifer in the East
Poplar Oil Field:

- 6 (a) Ajax Oil Company;
- 7 (b) Amarco Resource Corp.;
- 8 (c) Ashland Oil Inc.;
- 9 (d) Carter Oil Company;
- 10 (e) Empire State Oil Company;
- 11 (f) Grace Petroleum Corporation;
- 12 (g) Humble Oil and Refining;
- 13 (h) Juniper Petroleum Corp.;
- 14 (i) MAPCO Production Company;
- 15 (j) Mesa Petroleum Company;
- 16 (k) Natol Petroleum Corp.;
- 17 (l) Pioneer Natural Resources Company;
- 18 (m) Pioneer Natural Resources USA, Inc.;
- 19 (n) Phillips Petroleum Corp.;
- 20 (o) Richfield Oil Company;
- 21 (p) Samson Resources, Company;
- 22 (q) States Oil Company;
- 23 (r) Tenneco Oil Company;
- 24 (s) Texas Oil and Gas;

1 (t) Union Oil Company of California; and

2 (u) Any and all other oil exploration and production
3 companies that you are aware of that have conducted oil
4 exploration, maintenance, production or abandonment
5 activities in the East Poplar Oil Field.

6 **RESPONSE:** Murphy E&P does not believe that documents
7 exist relating to most of the identified companies concerning
8 the subject matter of this Request. Nevertheless, documents,
9 if any, responsive to this request which are in the possession
10 of Murphy E&P may be reviewed at those locations where such
11 records are maintained in the usual course of Murphy E&P's
12 business activities. These offices are located in Poplar,
13 Montana, El Dorado, Arkansas and New Orleans, Louisiana. Such
14 records, if any, will be made available for review upon
15 reasonable notice during regular business hours.

16 **REQUEST FOR PRODUCTION NO. 25:** Please produce copies of
17 all documents in your possession or control concerning receipt
18 of, analysis of, or comments concerning the following studies:

19 (a) Craigg, S.D. and Thamke, J.N., 1992, Overview of
20 Possible Effects of Brine Disposal on Shallow Ground
21 - Water Resources in the East Poplar Oil Field, Fort
22 Peck Indian Reservation, Northeastern Montana
23 [abs.]: American Water Resources Association,
24 Montana Section Meeting, Helena, Montana, September
17-18, 1992;

(b) Craigg, S.D. and Thamke, J.N., 1993, Hydrogeologic
Aspects of Brine Disposal in the East Poplar Oil
Field, Fort Peck Indian Reservation, Northeastern
Montana [abs]: Geological Society of America,
Cordilleran and Rocky Mountain Section Meeting,
Reno, Nevada, May 19-21, 1993, abstracts with
programs, v. 25, no. 5;

(c) Craigg, S.D. and Thamke, J.N., 1995, The Affects of
Oil-Field Brines and Aquifers - Brine Disposal in
the East Poplar Oil Field, Fort Peck Indian
Reservation, Northeastern Montana, in Carter, L.M.H.
ed, Energy and the Environment - Application of
Geosciences to Decision-Making; Program and Short
Paper; 10th V.E. McKelvey, Forum on Mineral and
Energy Resources, 1995: U.S. Geological Survey
Circular 1108;

- 1 (d) Mendes, T.M., Thamke, J.N. and Craig, S.D., 1992,
2 Application of Electromagnetic Geophysical
3 Techniques to Delineate Saline-Water Plums in
4 Shallow Aquifers of the East Poplar Oil Field, Fort
5 Peck Indian Reservation, Northeastern Montana
6 [abs.]: American Water Resources Association,
7 Montana Section Meeting, Helena, Montana, September
8 17-18, 1992;
- 9 (e) Thamke, J.N., Craig, S.D., and Mendes, T.M., 1992,
10 Changes in Ground-water Quality resulting from
11 Saline-Water Migration in a Shallow Glacier Aquifer
12 in the East Poplar Oil Field, Fort Peck Indian
13 Reservation, Northeastern Montana [abs.]: American
14 Water Resources Association, Montana Section
15 Meeting, Helena, Montana, September 17-18, 1992;
- 16 (f) Thamke, J.N., Craig, S.D., and Mendes, T.M., 1993,
17 Use of Electromagnetic Geophysical Techniques and
18 Auger Drilling to Delineate Saline-Water Plumes in
19 the East Poplar Oil Field, Fort Peck Indian
20 Reservation, Northeastern Montana [abs.]: American
21 Association of Petroleum Geologists, Rocky Mountain
22 Section Meeting, Salt Lake City, Utah, September 12-
23 15, 1993, Abstracts and Program, page 67-68;
- 24 (g) Thamke, J.N., Craig, S.D., and Mendes, T.M., 1996,
Hydrogeologic Data for the East Poplar Oil Field,
Fort Peck Indian Reservation, Northeastern Montana:
U.S. Geological Survey Open-File Report 95-749, 92
P.; and
- (h) Saline-Water Contamination in Quaternary Deposits in
the Poplar River, East Poplar Oil Field,
Northeastern Montana, Water-Resources Investigations
Report 97-4000.

19 **RESPONSE:** Murphy E&P objects to this Request because it
20 seeks matters which are privileged and protected. The
21 requested documents are comprised of documents which have been
22 prepared in response to this litigation or otherwise were
23 prepared in anticipation of litigation and/or reflect the
24 mental impressions, conclusions or legal theories generated in
response to such studies.

23 **REQUEST FOR PRODUCTION 26:** Please produce copies of all
24 documents provided by Murphy to the U.S. Geological Service

1 (Thamke and Craigg) as reflected at pages 8-9 of the Report
2 (1997).

3 RESPONSE: Murphy E&P objects to this request and states
4 that the party possessing the requested documents is the U. S.
5 Geological Survey. Without waiving this objection, Murphy E&P
6 does not have a listing or inventory of what documents it
7 provided to the USGS. Murphy E&P personnel recollect that
8 they provided one or more maps to the U.S.G.S. personnel who
9 were present within the East Poplar Unit. Copies of East
10 Poplar Unit Area maps in Murphy E&P's possession may be
11 reviewed at Murphy E&P's Poplar, Montana office upon
12 reasonable notice during regular business hours.

13 REQUEST FOR ADMISSION NO. 4: Please admit that the
14 quaternary deposits in and around the East Poplar Oil Field
15 are an underground source of drinking water and supply
16 drinking water to persons living in and around the Field.

17 RESPONSE: Admit.

18 REQUEST FOR ADMISSION NO. 5: Please admit that the
19 quaternary deposits are the sole developed source of
20 groundwater for residents of the East Poplar Oil Field.

21 RESPONSE: Murphy E&P admits that the quaternary deposits
22 are a source of groundwater which have been developed by some
23 parties residing within the East Poplar Oil Field. While
24 Murphy E&P believes that these deposits are the main source of
groundwater for such residents, Murphy E&P does not know if
they are the "sole developed source."

REQUEST FOR PRODUCTION NO. 27: Please produce all
documents in your possession or control concerning the
existence of saline seep and possible sources of saline seep
in the East Poplar Oil Field.

RESPONSE: Murphy E&P has not completed its investigation
of the claims of the plaintiffs, and matters associated or
related to such claims. To date, Murphy E&P has obtained no
documents which identify possible sources of saline seep in
the East Poplar Oil Field. Documents, if any, pertaining to
saline seeps generally which may be in the possession of
Murphy E&P may be reviewed at the locations where such records
would be maintained in the usual course of Murphy E&P's
business activities. Those offices are located in Poplar,
Montana and New Orleans, Louisiana. Such records will be made

1 available for review upon reasonable notice during regular
2 office hours.

3 INTERROGATORY NO. 14: Please identify all studies,
4 reports, memos and other documents in your possession or
5 control concerning saline seep in the East Poplar Oil Field or
6 surrounding areas.

7 ANSWER: Murphy E&P objects to this request insofar as it
8 seeks information prepared in anticipation of litigation or
9 for trial. Without waiver of this objection, Murphy E&P is
10 unaware of any studies, reports, memos or other documents in
11 its possession directly related to saline seep within the East
12 Poplar Oil Field. It is possible that one or more such
13 documents may exist, however, within the files and records of
14 Murphy E&P. Since the burden of identifying any such document
15 would be substantially the same for Murphy E&P or the
16 plaintiffs, the records of Murphy E&P which might contain such
17 a document or report may be reviewed by the plaintiffs at the
18 offices where any such records would be maintained upon
19 reasonable notice during regular business hours. If such
20 documents or reports do exist within Murphy E&P's records,
21 Murphy E&P assumes that such would exist in the records of
22 Murphy E&P located either in Poplar, Montana or New Orleans,
23 Louisiana.

24 INTERROGATORY NO. 15: Please state the amount of revenue
your oil company has obtained from its oil production
facilities in the East Poplar Oil Field.

ANSWER: Murphy E&P objects to this interrogatory on the
basis that the information requested is not relevant to the
matter in dispute, nor is the interrogatory reasonably
calculated to lead to the discovery of admissible evidence.
The information requested has no relevance to the liability of
Murphy E&P, nor does it relate to or have any connection with
the plaintiffs' damage claims, since plaintiffs have produced
no information or basis upon which to reasonably believe that
punitive damages would be appropriate in this case.

INTERROGATORY NO. 16: Please identify the amount of
money your company has spent providing potable water to
residents of the East Poplar Oil Field.

ANSWER: Murphy E&P has incurred no expense in providing
potable water to residents within the East Poplar Oil Field.
Murphy E&P would add that unless this lawsuit could be

1 construed as such a request, no residents have, to the best of
2 Murphy E&P's knowledge, ever requested Murphy E&P to provide
3 them with water.

4 **INTERROGATORY NO. 17:** Please identify the amount of
5 money your company has spent monitoring the existence of
6 contaminated groundwater in the East Poplar Oil Field.

7 **ANSWER:** Murphy E&P objects that this interrogatory
8 assumes the existence of contaminated groundwater in the East
9 Poplar Oil Field. Murphy E&P also objects that the word
10 "contaminated" is undefined herein. Without waiver of these
11 objections, Murphy E&P states that it has not "monitor[ed]"
12 the existence of contaminated groundwater in the East Poplar
13 Oil Field." Murphy E&P has, however, spent significant sums
14 of money to see that its operations are conducted in
15 compliance with applicable state and federal laws and
16 regulations.

17 **INTERROGATORY NO. 18:** Please identify the amount of
18 money your company has spent attempting to remediate the
19 groundwater contamination problem in the East Poplar Oil
20 Field.

21 **ANSWER:** Murphy E&P objects that this interrogatory
22 assumes the existence of contaminated groundwater in the East
23 Poplar Oil Field. Murphy E&P also objects that the word
24 "contaminated" is undefined herein. Without waiver of these
objections, Murphy E&P also states that it does not admit or
agree that it has any duty or responsibility to remediate any
alleged groundwater contamination within the East Poplar Oil
Field. With that clarification, Murphy E&P has spent
significant sums of money in connection with its disposal of
produced water to see that its disposal operations are
conducted in compliance with all applicable state and federal
laws and regulations. These laws, and this expenditure of
monies by Murphy E&P, were intended to protect the
environment, including groundwater resources, from being
damaged. The focus of Murphy E&P's efforts and financial
investments has been directed to performing its operations and
activities in compliance with applicable laws, including
environmental laws.

25 **INTERROGATORY NO. 19:** Please identify the amount of
26 money your company has spent attempting to identify the source
27 of groundwater contamination in the East Poplar Oil Field.

1 **ANSWER:** Murphy E&P objects that this interrogatory
2 assumes the existence of contaminated groundwater in the East
3 Poplar Oil Field. Murphy E&P also objects that the word
4 "contaminated" is undefined herein. Without waiver of these
5 objections, Murphy E&P has, for decades, expended considerable
6 sums of money to see that its operations are conducted in
7 accordance with state and federal laws and regulations,
8 including environmental laws and regulations, so that such
9 operations do not adversely impact the environment. Murphy
10 E&P continues to monitor its production wells and disposal
11 wells, including conducting periodic mechanical integrity
12 testing of injection wells. Murphy E&P's efforts have, in
13 this fashion, been focused on safeguarding against
14 contamination of groundwater. Murphy E&P has not, to date,
15 attempted to discover other sources for groundwater
16 contamination, if any, within the East Poplar Oil Field.

17 **REQUEST FOR ADMISSION NO. 6:** Please admit that the
18 residents of the East Poplar Oil Field are entitled to safe
19 drinking water.

20 **RESPONSE:** Murphy E&P cannot admit or deny the request,
21 since Murphy E&P is unsure what is meant by the word
22 "entitled." Understanding the nature of groundwater and the
23 many factors at play in connection with the quality, quantity
24 and supply of groundwater, Murphy E&P cannot admit that every
resident within the East Poplar Oil Field has a natural
entitlement or absolute right to safe drinking water, or to
any water at all.

25 **REQUEST FOR ADMISSION NO. 7:** Please admit that you have
26 a duty to construct, operate, maintain, convert, plug, abandon
27 and/or conduct any other injection or disposal activity in a
28 manner that prohibits the movement of fluid containing any
29 contaminant into underground sources of drinking water, if the
30 presence of that contaminant may cause a violation of any
31 drinking water regulation under federal, tribal or state law
32 or may otherwise adversely affect the health of persons.

33 **RESPONSE:** Murphy E&P objects to this Request because it
34 requests the admission of a conclusion of law rather than the
35 admission of facts.

36 **REQUEST FOR PRODUCTION NO. 28:** Please produce copies of
37 all "notices of intention to abandon wells" filed with the
38 Montana Board of Oil and Gas Conservation.

1 RESPONSE: Murphy E&P objects to this request and states
2 that the party possessing the requested records is the Montana
3 Board of Oil and Gas Conservation, and not Murphy E&P. Murphy
4 E&P also objects to this request to the extent it could be
5 construed as relating to notices for wells located outside the
6 East Poplar Unit Area. Without waiving these objections, any
7 documents responsive to this request in the possession of
8 Murphy E&P related to the East Poplar Unit Area may be
9 reviewed at those locations where such records are maintained
10 in the usual course of Murphy E&P's business activities.
11 These offices are located in Poplar, Montana and New Orleans,
12 Louisiana. Such records will be made available for review
13 upon reasonable notice during regular business hours.

14 REQUEST FOR PRODUCTION NO. 29: Please produce copies of
15 all reports of abandonment filed with the Montana Board of Oil
16 and Gas Conservation.

17 RESPONSE: Murphy E&P objects to this request and states
18 that the party possessing the requested records is the Montana
19 Board of Oil and Gas Conservation, and not Murphy E&P. Murphy
20 E&P also objects to this request to the extent it could be
21 construed as relating to reports for wells located outside the
22 East Poplar Unit Area. Without waiving these objections, any
23 documents responsive to this request in the possession of
24 Murphy E&P relating to the East Poplar Unit Area may be
reviewed at those locations where such records are maintained
in the usual course of Murphy E&P's business activities.
These offices are located in Poplar, Montana and New Orleans,
Louisiana. Such records will be made available for review
upon reasonable notice during regular business hours.

REQUEST FOR PRODUCTION NO. 30: Please produce all other
records filed with the Montana Oil and Gas Conservation
Commission showing or concerning the abandonment and plugging
of all wells in the East Poplar Oil Field.

RESPONSE: Murphy E&P objects to this request and states
that the party possessing the requested records is the Montana
Board of Oil and Gas Conservation, and not Murphy E&P.
Without waiving this objection, any documents responsive to
this request in the possession of Murphy E&P may be reviewed
at those locations where such records are maintained in the
usual course of Murphy E&P's business activities. These
offices are located in Poplar, Montana and New Orleans,
Louisiana. Such records will be made available for review
upon reasonable notice during regular business hours.

1 INTERROGATORY NO. 20: Please identify all contract
2 pumpers who performed work for you in the East Poplar Oil
3 Field.

4 ANSWER:

5 Howard Azure
6 Poplar, MT
7 406-768-3364

8 Terrell Sutherland
9 Poplar, MT
10 Telephone Number Unknown

11 Shane Corne
12 Poplar, MT
13 406-768-3871

14 Wayne Spotted Bull
15 Address and Telephone
16 Not Now Known

17 INTERROGATORY NO. 21: Please state whether your company
18 has installed any "relief wells" during its tenure in the East
19 Poplar Oil Field.

20 RESPONSE: Murphy E&P has installed no "relief wells"
21 during its tenure in the East Poplar Unit [NOTE: Murphy E&P
22 has assumed that the term "relief well" is intended to have
23 the definition set forth in *Williams & Meyers Manual of Oil &*
24 *Gas Terms, 10th Edition*, which defines a relief well as "a well
drilled to intersect another well at some point below the
surface, used to regain control of a well that is out of
control."]

REQUEST FOR PRODUCTION NO. 31: If your answer to the
immediately preceding interrogatory is in the affirmative,
please produce all documents describing work done on the
relief well, all documents concerning the relief filed with
the Montana Oil and Gas Conservation Commission, all invoices
describing any work done on the relief well and all
applications for permits for the relief well.

RESPONSE: Not applicable.

1 REQUEST FOR PRODUCTION NO. 32: Please produce copies of
2 all applications for permits to construct injection wells,
relief wells and any other wells in the East Poplar Oil Field.

3 RESPONSE: Documents responsive to this request in the
4 possession of Murphy E&P may be reviewed at the locations
5 where such documents are maintained in the usual course of
6 Murphy E&P's business activities. The offices where such
records are maintained are located in Poplar, Montana and New
Orleans, Louisiana. These records will be made available for
review upon reasonable notice during regular business hours.

7 REQUEST FOR PRODUCTION NO. 33: Please produce copies of
8 all updated plans for plugging and abandoning any wells under
your jurisdiction and control.

9 RESPONSE: Murphy E&P objects to this request to the
10 extent it could be construed as relating to plans for wells
11 located outside the East Poplar Unit Area. Without waiving
12 this objection, documents, if any, responsive to this request
13 in the possession of Murphy E&P related to the East Poplar
14 Unit Area may be reviewed at those locations where such
records are maintained in the usual course of Murphy E&P's
business activities. These offices are located in Poplar,
Montana and New Orleans, Louisiana. Such records, if any,
will be made available for review upon reasonable notice
during regular business hours.

15 REQUEST FOR PRODUCTION NO. 34: Please produce or make
16 available for inspection all logs of wells for all saltwater
disposal wells under your jurisdiction and control.

17 RESPONSE: Murphy E&P objects to this request to the
18 extent it could be construed as relating to logs for wells
19 located outside the East Poplar Unit Area. Documents, if any,
20 responsive to this request in the possession of Murphy E&P
21 related to the East Poplar Unit Area may be reviewed at those
locations where such records are maintained in the usual
course of Murphy E&P's business activities. These offices are
located in Poplar, Montana and New Orleans, Louisiana. Such
records, if any, will be made available for review upon
reasonable notice during regular business hours.

22 REQUEST FOR PRODUCTION NO. 35: Please produce all
23 internal policies, procedures, rules or restrictions governing
24 the injection of brine through brine injection wells.

1 RESPONSE: Murphy E&P objects to this request to the
2 extent it could be construed as relating to matters outside
3 the East Poplar Unit Area. Without waiving this objection,
4 Murphy E&P states that it has no such policies or rules.
5 Injection operations are subject to the terms of the permits
6 received from the Environmental Protection Agency.

7 REQUEST FOR PRODUCTION NO. 36: Please produce copies of
8 all internal policies, procedures, rules or restrictions
9 governing the disposal of water byproducts from the production
10 of oil.

11 RESPONSE: Murphy E&P objects to this request to the
12 extent it could be construed as relating to matters outside
13 the East Poplar Unit Area. Without waiving this objection,
14 Murphy E&P has no such records. Injection operations are
15 subject to the terms of the permits received from the
16 Environmental Protection Agency.

17 REQUEST FOR PRODUCTION NO. 37: Please produce copies of
18 all internal policies, procedures, rules or restrictions
19 governing the abandonment and capping of oil wells.

20 RESPONSE: Murphy E&P objects to this request to the
21 extent it could be construed to relate to internal policies,
22 etc. for wells located outside the East Poplar Unit Area.
23 Without waiving this objection, Murphy E&P states that it has
24 no such records. Plugging and abandonment operations are
carried out subject to the orders of the Bureau of Land
Management (for Indian wells), the Montana Board of Oil and
Gas Conservation (for fee wells), and the Environmental
Protection Agency for disposal wells. All plugging and
abandoning activities must be approved in advance by such
agencies.

REQUEST FOR PRODUCTION NO. 38: Please produce copies of
all reports of investigations, whether conducted internally or
otherwise, concerning the contamination, or possible
contamination of the aquifer underlying the East Poplar Oil
Field.

RESPONSE: Murphy E&P has obtained copies only of the
U.S.G.S. reports referred to in Plaintiffs' Request for
Production No. 25. Those reports can be obtained from the
USGS.

1 REQUEST FOR PRODUCTION NO. 39: Please produce copies of
2 all minutes of Murphy E&P's Board of Directors or committees
3 and any and all amendments thereto or supplements thereof
4 which refer to groundwater contamination, or the potential for
5 groundwater contamination in the East Poplar Oil Field.

6 RESPONSE: The minutes of Murphy E&P do not contain any
7 reference to alleged groundwater contamination in the East
8 Poplar Oil Field.

9 REQUEST FOR PRODUCTION NO. 40: Please produce copies of
10 all maintenance records for all disposal wells or disposal
11 systems in the East Poplar Oil Field.

12 RESPONSE: Murphy E&P does not possess records for "all
13 disposal wells or disposal systems" within the East Poplar Oil
14 Field. Murphy E&P only has records related to its disposal
15 wells and disposal systems. Documents responsive to this
16 Request which are in the possession of Murphy E&P may be
17 reviewed at those locations where such records are maintained
18 in the usual course of Murphy E&P's business activities.
19 Those offices are located in Poplar, Montana and New Orleans,
20 Louisiana. Such records will be made available for review
21 upon reasonable notice during regular business hours.

22 REQUEST FOR PRODUCTION NO. 41: Please produce copies of
23 all injection records for all disposal wells and disposal
24 systems within the East Poplar Oil Field.

25 RESPONSE: Murphy E&P does not possess records for "all
26 disposal wells and disposal systems" within the East Poplar
27 Oil Field. Murphy E&P only has records related to its
28 disposal activities. Those documents may be reviewed at the
29 locations where such records are maintained in the usual
30 course of Murphy E&P's business activities. Those offices are
31 in Poplar, Montana and New Orleans, Louisiana. Such records
32 will be made available for review upon reasonable notice
33 during regular business hours.

34 REQUEST FOR PRODUCTION NO. 42: Please produce copies of
35 all documents reflecting pressure loss or pressure tests in
36 all disposal wells or disposal systems in the East Poplar Oil
37 Field.

38 RESPONSE: Murphy E&P does not possess records for "all
39 disposal wells and disposal systems" within the East Poplar
40 Oil Field. Murphy E&P has records only related to its

1 disposal activities. Those documents may be reviewed at the
2 locations where such records are maintained in the usual
3 course of Murphy E&P's business activities. Those offices are
4 in Poplar, Montana and New Orleans, Louisiana. Such records
5 will be made available for review upon reasonable notice
6 during regular business hours.

7 REQUEST FOR PRODUCTION NO. 43: Please produce copies of
8 all documents sent by Murphy Production to all of the
9 following oil companies, or its accountants, agents,
10 attorneys, officers or directors, concerning contamination, or
11 possible contamination, of the groundwater aquifer in the East
12 Poplar Oil Field:

- 13 (a) Ajax Oil Company;
- 14 (b) Amarco Resource Corp.;
- 15 (c) Ashland Oil Inc.;
- 16 (d) Carter Oil Company;
- 17 (e) Empire State Oil Company;
- 18 (f) Grace Petroleum Corporation;
- 19 (g) Humble Oil and Refining;
- 20 (h) Juniper Petroleum Corp.;
- 21 (i) MAPCO Production Company;
- 22 (j) Mesa Petroleum Company;
- 23 (k) Natol Petroleum Corp.;
- 24 (l) Pioneer Natural Resources Company;
- (m) Pioneer Natural Resources USA;
- (n) Phillips Petroleum Corp.;
- (o) Richfield Oil Company;
- (p) Samson Resources Company;
- (q) States Oil Company;
- (r) Tenneco Oil Company;

- 1 (s) Texas Oil and Gas;
2 (t) Union Oil Company of California; and
3 (u) Any and all other oil exploration & production
4 companies that you are aware of that have conducted
oil exploration, production, maintenance or
abandonment activities in the East Poplar Oil Field.

5 **RESPONSE:** [NOTE: "Murphy Production" is assumed to mean
6 Murphy E&P in this request.] Murphy E&P objects to this
7 request insofar as it could be construed to seek work product
information protected by any joint defense privileges.

8 **REQUEST FOR PRODUCTION NO. 44:** Please produce copies of
9 all documents identified in your Pre-discovery Disclosure
Statement dated 11/3/98.

10 **RESPONSE:** Such documents may be viewed at the locations
11 where they are maintained in the usual course of Murphy E&P's
12 business activities. Those offices are in Poplar, Montana and
New Orleans, Louisiana. Such records will be made available
for review upon reasonable request during regular business
hours.

13 **INTERROGATORY NO. 22:** Please identify all state and
14 federal regulations governing Murphy's oil field activities as
set forth in your affirmative defenses. See ¶ 25.

15 **ANSWER:** Murphy E&P objects to this interrogatory on the
16 grounds that it would require Murphy E&P's counsel to compile
17 a list of each and every regulation governing oil field
18 activities. Such conclusions of law are not within the proper
19 scope of fact discovery. Without waiving these objections,
20 Murphy E&P states that federal regulations governing oil and
21 gas operations on Indian lands are found in various portions
22 of Titles 25, 30 and 43 of the Code of Federal Regulations.
23 In addition, various Onshore Orders and various Notices to
24 Lessees ("NTL's") issued by the Secretary of the Interior or
his representative also govern such operations, as do various
instructional memorandums to lessees. Injection activities
are controlled by regulations contained in Title 40 of the
Code of Federal Regulations. State regulations are found
within regulations of the Montana Board of Oil and Gas
Conservation, and other agencies of the State.

1 INTERROGATORY NO. 23: Please explain the standard of
2 care you contend applies to your oil field activities. See
Affirmative Defenses, ¶ 25.

3 ANSWER: Murphy E&P objects to this interrogatory on the
4 grounds that it seeks only conclusions of law and not factual
information. The Court will determine what standard of care
applies, after appropriate briefing from the parties.

5 REQUEST FOR PRODUCTION NO. 45: Please produce copies of
6 all documents relied upon or referred to in answering the
immediately preceding interrogatory.

7 RESPONSE: Murphy E&P objects because this request seeks
8 conclusions, legal theories, opinions, materials and research
developed in preparation of the defense of this lawsuit.

9 INTERROGATORY NO. 24: Please identify all "necessary
10 and/or indispensable parties to this suit" that you contend
the Plaintiffs have failed to join as parties to this
11 litigation. See Affirmative Defenses, ¶ 26.

12 ANSWER: Murphy E&P has not yet completed its
13 investigation into the claims herein advanced by the
14 plaintiffs. Thus, Murphy E&P has not yet identified those
15 parties who would be necessary and/or indispensable to this
16 action. However, in answering this interrogatory to the best
17 of its present ability, Murphy E&P believes that all those who
18 have utilized the surface of the East Poplar Oil Field (and
19 perhaps lands adjacent to, but outside the East Poplar Unit
Area boundaries) for farming, mineral development or other
surface uses, as well as all those who have resided on such
land, are potentially necessary and/or indispensable parties.
In addition, since plaintiffs are claiming property damages,
all persons with interests in the subject properties,
including but not limited to security interests, may be
necessary and/or indispensable parties.

20 INTERROGATORY NO. 25: Please state whether Murphy
21 Exploration and Production Company has been involved in
22 litigation concerning the contamination, or possible
contamination, of any real property within the East Poplar Oil
Field or the groundwater aquifer below the East Poplar Oil
Field.

23 ANSWER: Murphy E&P has not been involved in such
24 litigation, but one of its predecessors has.

1 INTERROGATORY NO. 26: If your answer to the immediately
2 preceding interrogatory is in the affirmative, please identify
the litigation by case name, cause number and venue.

3 ANSWER: O. A. Lien and Blue Ox Corporation vs. Murphy
4 Corporation, Cause No. 7878, In the District Court of the
Fifteenth Judicial District of the State of Montana, In and
for the County of Roosevelt.

5 Blue Ox Corporation and O. A. Lien vs. Murphy Oil
6 Corporation, Cause No. 9317, In the District Court of the
7 fifteenth Judicial District of the State of Montana, In and
For the County of Roosevelt, removed to federal court as Cause
8 No. CV-81-28-GF in the United States District Court for the
District of Montana, Great Falls Division.

9 REQUEST FOR PRODUCTION NO. 46: Please produce copies of
10 all documents relied upon or referred to in answering the
immediately two preceding interrogatories.

11 RESPONSE: Murphy E&P objects to this request insofar as
12 it seeks documents protected by the attorney-client privilege
or the work product doctrine. Non-protected documents
13 responsive to this Request which are in the possession of
Murphy E&P may be reviewed at those locations where such
14 records are maintained in the usual course of Murphy E&P's
business activities. Those offices are located in Poplar,
15 Montana, New Orleans, Louisiana and El Dorado, Arkansas. Such
records will be made available for review upon reasonable
notice during regular business hours.

16 INTERROGATORY NO. 27: Please state whether Murphy
17 Exploration and Production Company have received any
correspondence from any attorney, or litigants, claiming
18 damages for contamination of their real property within the
East Poplar Oil Field, that did not result in litigation.

19 ANSWER: Yes.

20 REQUEST FOR PRODUCTION NO. 47: Please produce copies of
21 all documents referred to or relied upon in answering the
immediately preceding interrogatory.

22 ANSWER: Documents responsive to this request which are
23 in the possession of Murphy E&P may be reviewed at those
locations where such records are maintained in the usual
24 course of Murphy E&P's business activities. Those offices are

1 located in Poplar, Montana and New Orleans, Louisiana. Such
2 records will be made available for review upon reasonable
3 notice during regular business hours.

4 Dated this 9 day of April, 1999.

5 CROWLEY, HAUGHEY, HANSON,
6 TOOLE & DIETRICH P.L.L.P.

7 By 

8 CAROLYN S. OSTBY

9 P. O. Box 2529

10 Billings, MT 59103-2529

11 Attorneys for Defendants

12 Murphy Oil USA, Inc. and

13 Murphy Exploration &

14 Production Co.

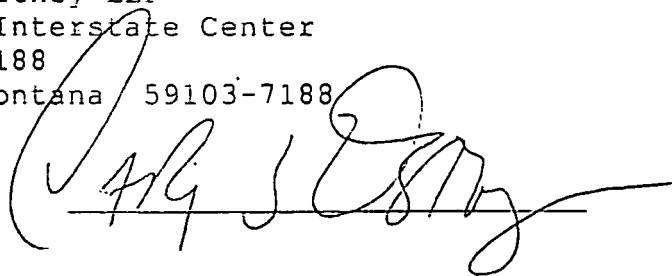
15 CERTIFICATE OF SERVICE

16 I, hereby certify that on the 9th day of April, 1999,
17 a copy of the foregoing was served by First Class Mail upon
18 the following counsel of record:

19 Richard J. Dolan
20 Robert K. Baldwin
21 Goetz, Gallik, Baldwin & Dolan, P.C.
22 35 North Grand
23 P. O. Box 428
24 Bozeman, Montana 59771-0428

John Walker Ross
Brown Law Firm, P.C.
315 North 24th Street
P. O. Drawer 849
Billings, Montana 59103-0849

Robert Sterup
Dorsey & Whitney LLP
1200 First Interstate Center
P. O. Box 7188
Billings, Montana 59103-7188



1 STATE OF LOUISIANA)
2 Parish of Orleans) ss.

3
4 Sidney W. Campbell, being first duly sworn, deposes and
5 states that he is the Manager-Onshore Operations for Murphy
6 Exploration & Production Company. In such capacity, he states
7 that he has read the foregoing interrogatories and the answers
8 on behalf of Murphy Exploration & Production Company and that
9 said answers are true and correct to the best of his
10 knowledge, information, and belief. With respect to matters
11 concerning legal knowledge, however, he has consulted with
12 legal counsel to assist in the preparation of those answers.

13 Sidney W. Campbell
SIDNEY W. CAMPBELL

14 Subscribed and sworn to before me this 14th day of

15 April, 1999

16 Steven J. Jones
17 Notary Public for the State of Louisiana
18 Residing at _____
(SEAL) My Commission Expires BY PUBLIC
19 IN AND FOR JEFFERSON PARISH
20 STATE OF LOUISIANA
21 MY COMMISSION EXPIRES AT DEATH
22
23
24